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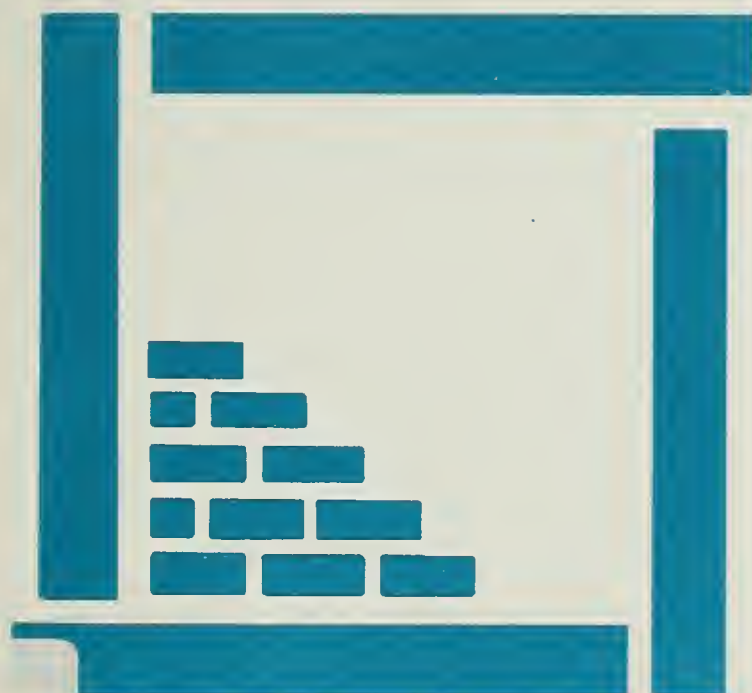
Census of Construction Industries

CC87-I-8

INDUSTRY SERIES

**Water, Sewer, Pipeline,
and Communications
and Powerline
Construction Contractors**

Industry 1623



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ACKNOWLEDGMENTS

Many persons participated in the various activities of the 1987 Census of Construction Industries.

The overall planning and review of the census operations were performed by the staff of the Office of the Assistant Director for Economic and Agriculture Censuses.

This report was prepared in the Construction Statistics Division. **Barry A. Rappaport**, Assistant Division Chief for Industry Surveys, was responsible for the overall planning, management, and coordination of the census of construction industries. Planning and implementation were under the direction of **A. William Visnansky**, Chief, Census Operations Branch, with primary staff assistance by **Juliana Van Berkum**, **Barbara J. Hadden**, **Edward R. Glover**, **Susan L. Hostetter**, **Shirley M. Baker**, and **Carolyn J. Stone**. Under the direction of **Jesse Pollock**, **Edward K. Ricketts** and **Dennis K. Duke** developed the sampling plans and variance and estimation specifications.

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If you have any questions concerning the statistics in this report, call (301) 763-7546.

1987

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Industry 1623

Issued January 1990



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PURPOSE AND USES OF THE ECONOMIC CENSUSES

The economic censuses are the major source of facts about the structure and functioning of the Nation's economy. They provide essential information for government, business, industry, and the general public.

Economic censuses furnish an important part of the framework for such composite measures as the gross national product, input-output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions.

Policy-making agencies of the Federal Government use the data, especially in monitoring economic activity and providing assistance to business.

State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.

Trade associations study trends in their own and competing industries, and keep their members informed of market changes.

Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

AUTHORITY AND SCOPE

Title 13 of the United States Code (sections 131, 191, and 224) directs the Census Bureau to take the economic censuses every 5 years, covering years ending in 2 and 7. The 1987 Economic Censuses consist of the—

- Census of Retail Trade
- Census of Wholesale Trade
- Census of Service Industries
- Census of Transportation
- Census of Manufactures
- Census of Mineral Industries
- Census of Construction Industries

Special programs also cover enterprise statistics and minority-owned and women-owned businesses. (The 1987 Census of Agriculture and 1987 Census of Governments are conducted separately.) The next economic censuses are scheduled to be taken in 1993 covering the year 1992.

AVAILABILITY OF THE DATA

The results of each of the economic censuses are available in printed reports, for sale by the U.S. Government Printing Office, and on microfiche, computer tape, compact discs with read-only memory, and flexible diskettes, for sale by the Census Bureau. Order forms for all types of products are available on request from Customer Services, Census Bureau, Washington, DC 20233. A more complete description of publications being issued from this census is on the inside back cover of this document.

Census facts are also widely disseminated by trade associations, business journals, and newspapers. Volumes containing census statistics are available in most major public and college libraries. Finally, State Data Centers in every State and Business and Industry Data Centers in many States also supply economic census statistics.

WHAT'S NEW IN 1987

Several changes have taken place for the 1987 censuses. Data will be reported on the basis of the newly revised Standard Industrial Classification (SIC) system with selected reports including "bridge tables," linking the old and new classification systems. A new set of metropolitan

areas has been adopted, and more detailed information will be available for businesses with no paid employees. For additional information on these changes, review the subsequent text.

One important change involves receipts of contractors and builders. Prior to 1987, the Census of Construction Industries collected receipts as the primary measure of construction activity. For 1987, the census collected the "value of construction work done" to better measure actual construction activity done during the year. Differences between the two concepts occur when work is done in one year and payment received either from the prior or in the succeeding year. In addition, receipts do not include work a contractor performs for its own account and use.

HISTORICAL INFORMATION

The economic censuses have been taken together as an integrated program at 5-year intervals since 1967, and before that for 1963, 1958, and 1954. Prior to that time, the individual censuses were taken separately at varying intervals.

The economic censuses trace their beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for 1840 and subsequent censuses to include mining and some commercial activities. In 1902, Congress established a permanent Census Bureau and directed that a census of manufactures be taken every 5 years. The 1905 manufactures census was the first time a census was taken apart from the regular every-10-year population census.

The first census of business was taken in 1930, covering 1929. Initially it covered retail and wholesale trade, and construction industries, but it was broadened in 1933 to include some of the service trades.

The 1954 economic censuses were the first to be fully integrated—providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. These were the first censuses to be taken by mail, using lists of firms provided by the administrative records of other federal agencies. Since 1963, administrative records have also been used to provide basic statistics as well for very small firms, reducing or eliminating the need to send them census questionnaires. The Enterprise Statistics Program, which publishes combined data from the economic censuses, was made possible with the implementation of the integrated census program in 1954.

The range of industries covered in the economic censuses has continued to expand. The Census of Construction Industries began on a regular basis in 1967, and the scope of service industries was broadened in 1967, 1977, and 1987. The Census of Transportation began in 1963 as a set of surveys covering travel, transportation of commodities, and trucks. New for 1987 are publications reporting on business establishments engaged in several transportation industries, paralleling the data on establishments in

other sectors. This is part of a gradual expansion in coverage of industries previously subjected to government regulation. The Survey of Minority-Owned Business Enterprises was first conducted as a special project in 1969 and was incorporated into the economic censuses in 1972 along with the Survey of Women-Owned Businesses.

Economic censuses have also been taken in Puerto Rico since 1909, in the Virgin Islands and Guam since 1958, and in the Northern Mariana Islands since 1982.

Statistical reports from the 1982 and earlier censuses provide historical figures for the study of long-term time series, and are available in some large libraries. All of the census data published since 1967 are still available for sale on microfiche from the Census Bureau.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

While the censuses provide complete enumerations every 5 years, there are many needs for more frequent data as well. The Census Bureau conducts a number of monthly, quarterly, and annual surveys, the results of which appear in publication series such as *Current Construction Reports* (building permits, housing starts, and value of new construction put in place), *Current Business Reports* (retail and wholesale trade and service industries), the *Annual Survey of Manufactures*, *Current Industrial Reports*, and the *Quarterly Financial Report*. Most of these surveys, while providing more frequent observations, yield less kind-of-business and geographic detail than the censuses. The *County Business Patterns* program offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1987 Economic Censuses and Related Statistics*. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1987 Economic Censuses*. Contact Customer Services for information on availability.

CENSUS OF CONSTRUCTION INDUSTRIES—SCOPE AND CLASSIFICATION

The 1987 Census of Construction Industries covers all employer establishments (establishments with payroll) primarily engaged in contract construction, construction on their own account for sale, or in subdividing real property

into lots as defined in the 1987 Standard Industrial Classification (SIC) Manual.¹ This industrial classification system has been developed by experts on classification in government and private industry under the guidance of the Office of Management and Budget and is in general use among government agencies and among organizations outside the government.

Contract construction—The SIC manual defines construction in three broad types of activity that follow:

1. **Building construction by general contractors or by operative builders**—General building contractors are primarily engaged in the construction of dwellings, office buildings, stores, farm buildings, and other building projects. Operative builders who build on their own account for sale are also included here. However, investment builders who build structures on their own account for rent are classified in Real Estate.
2. **Heavy construction general contractors**—Heavy construction general contractors are primarily engaged in the construction of highways, bridges, pipelines, sewers and water lines, marine construction, power, and petro-chemical plants and other nonbuilding construction projects. Special trade contractors are classified in heavy construction if they are specifically engaged in the following activities: grading for highway and airport runways; guardrail construction; installation of highway signs; asphalt and concrete construction of roads, highways, streets and public sidewalks; trenching, cable laying; conduit construction; underwater rock removal; pipeline wrapping; or land clearing and leveling.
3. **Construction by other special trade contractors**—These contractors include plumbers, painters, carpenters, electricians, brick layers, roofers, etc. For the most part, they perform their work at the site of construction, although they may also have shops where they perform work incidental to the job site.

General contractors in both the building and the heavy construction field usually assume responsibility for an entire construction project, but may subcontract to others all of the actual construction work or those portions of the project requiring special skills or equipment. Special trade contractors may work for general contractors, for other subcontractors, or may work directly for the owner of the property.

In addition to the industries classified in the SIC manual as Construction, this census also includes one industry

classified in the Real Estate area, SIC 6552, Land Subdividers and Developers, Except Cemeteries. These establishments are engaged in subdividing real property into lots and in developing it for sale on their own account.

Each establishment receiving a questionnaire was requested to report the percent of total dollar value of business done for each kind-of-business activity engaged in during 1987. This information was used for the computer assignment of appropriate industry classifications. During this work, various tests were also made using other data reported on the questionnaire. The proportion of construction work to total business was checked to verify that the establishment was primarily in construction. Also taken into consideration were the types of structures worked on during the year and the extent of work undertaken for other contractors.

Construction establishments often engage in various construction activities. It is necessary, however, to assign a single industry code to the establishment based on its major activity. Therefore, the statistics shown for an industry reflect not only the primary activity of the establishments in the industry, but also their secondary activities. The industry reports, however, do present data on the extent of secondary activities.

A revised edition of the SIC Manual was issued in 1987. Minor modifications were made to three industries in the construction sector: SIC 1611, Highway and Street Construction Contractors, Except Elevated Highways; SIC 1629, Heavy Construction Contractors, N.E.C.; and SIC 1771, Concrete Work Special Trade Contractors. The extent of these modifications are explained in the specific texts for those industries. "Bridge tables" are also included showing selected data tabulated using both the previous classification system and the 1987 revision.

ESTABLISHMENT BASIS OF REPORTING

The census of construction industries is conducted on an establishment basis. A "construction establishment" is defined as a relatively permanent office or other place of business where the usual business activities related to construction are conducted. With some exceptions, a relatively permanent office is one which has been established for the management of more than one project or job and which is expected to be maintained on a continuing basis. Such "establishment" activities include, but are not limited to estimating, bidding, purchasing, supervising, and operation of the actual construction work being conducted at one or more construction sites. Separate construction reports were not required for each project or construction site.

Companies with more than one construction establishment were required to submit a separate report for each such establishment operated during all or any part of 1987. The census of construction industries figures represent a summary of records for individual establishments rather than for companies. The census tabulations, therefore, differ from those prepared on a company basis.

¹Standard Industrial Classification Manual: 1987. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 041-001-00314-2.

If an establishment engaged in construction and one or more distinctly different lines of economic activity (wholesale or retail trade, service, manufacturing, mining, etc.) at the same place of business, it was requested to file a separate report appropriate to each activity, provided that the activity was of substantial size and separate records were maintained or substantially accurate estimates could be prepared.

If a separate establishment report could not be prepared for each activity, then a construction report was requested covering all activities of that establishment providing that the 1987 value of construction work exceeded the gross receipts from each of its other activities.

Construction businesses with no payroll during 1987 (nonemployers) were not required to file census reports. Tabulation of data for these businesses are based on administrative records and are shown only in U.S. summary publications and the geographic area reports series. Refer to the section on "Sample Design" for details. Foreign construction activities were not included in this census.

SAMPLE DESIGN, ESTIMATION PROCEDURES, AND RELIABILITY OF ESTIMATES

The companies included in the 1987 Census of Construction Industries were identified as part of an operation common to all 1987 Economic Censuses. Construction companies were divided into employers (companies with payroll) and nonemployers (companies without payroll). Statistical information for the employers was obtained in the census by a survey which included all medium size and large employers and a sample of the smaller ones. Census reports were not required from the nonemployers. Statistics on them were obtained from administrative records of other agencies of the Federal Government.

Employer Companies

Developing the sampling frame for employer companies—This operation started with obtaining a list of all construction companies in the active records of the Internal Revenue Service (IRS) which were subject to payment of Federal Insurance Contributions Act taxes. The basic source for this list has been the Internal Revenue Service Business Master File, a comprehensive list of companies engaged in business activities in the United States. The file contains the name, address, and form of ownership of each company and also indicates whether or not the company is subject to the FICA. Each company in this file is assigned a unique employer identification (EI) number which it uses in filing its various reports with the IRS. The Social Security Administration (SSA) maintains a similar list using the same identification numbers, which also contains information on the industrial classification of each company. The Bureau of the Census obtained both of these lists and combined them.

Under special arrangements which safeguarded the confidentiality of the information, the Bureau also obtained administrative records data on payrolls and receipts and added these data to the combined list. The list, thus created from the IRS-SSA information, was a list of employer companies. However, for the 1987 Economic Censuses the basic reporting unit is the "establishment." Therefore, steps were taken to identify the individual establishments of those companies which operate more than one place of business. The information for making this determination was obtained by means of the Company Organization Survey (COS), an annual canvass of all known multiestablishment companies and large single-establishment companies. Thus, the 1987 Economic Census list for single-establishment employer companies was obtained from the IRS-SSA, but the list of establishments of multiestablishment employer companies was obtained directly from those companies in the COS. Refer to the section on "Establishment Basis for Reporting" for details.

In general, the IRS-SSA list provided sufficient industrial classification data to assign a company to the proper economic census, but there were a number of companies for which this information was inadequate or unavailable. A special form, NC-9923, General Schedule, was mailed to all such companies, requesting information on the nature of the company's activities. From the information reported, the company was given an industrial classification code and assigned to the appropriate economic census. Since construction companies found in this way were identified only after the regular census mailing had taken place, they were treated as a supplement to the basic list.

Selecting the employer sample—The sample was designed to provide reliable State and metropolitan area estimates for each construction industry. It consisted of all construction establishments in multiestablishment companies, all single-establishment companies with estimated total employment of 20 employees or more, and a probability sample of single-establishment companies with estimated employment of fewer than 20 employees.

Supplementing the sample were construction companies identified from the NC-9923, General Schedule. Also affecting the sample were the misclassified companies; i.e., companies included in the samples of other trade areas which reported they were construction companies and companies originally classified in construction which reported they were not construction companies.

Of the 533,000 single-establishment employer companies initially classified as construction companies, 147,000 were included in the sample. All of the 13,000 establishments of multiestablishment companies were included in the sample. There was a net increase in the sample of 60,000 establishments resulting from establishments originally unclassified (receiving the NC-9923) or misclassified.

The probability sample of the smaller single-establishment companies was a stratified random sample. Strata were formed from all establishments with the same initial four-digit SIC code, in the same State, in the same metropolitan

area or in the balance of the State, and in the same size class based on estimated total employment. If the four-digit SIC code for an establishment was incomplete, the establishment was placed in a stratum for miscellaneous companies. Because they were small, all companies were included in the sample for the following three industries: SIC 1622, Bridge, Tunnel, and Elevated Highway Construction Contractors; SIC 1795, Wrecking and Demolition Work Special Trade Contractors; and SIC 1796, Installation or Erection of Building Equipment Special Trade Contractors.

Estimation procedures for 1987 and 1982 data—Since all larger employer companies and some smaller ones were included in the census, sample estimation was required only for the universe of companies not selected with certainty. The published statistics are the totals of the estimates for the sampled companies and the aggregates for the certainty companies. All estimates for 1987 and 1982 published here are simple unbiased estimates of the form:

$$x'_c = \sum_{i=1}^{n_c} x_i / p_i$$

where: x'_c is the simple unbiased estimate of a characteristic for a publication cell.

x_i is the reported value of a characteristic for an individual establishment in the publication cell.

p_i is the selection probability of that firm.

n_c is the number of firms in the sample for the cell.

Data for certain characteristics were reported as a percentage of the dollar value of business done. Before this formula was applied to those characteristics, it was necessary to convert the reported percentages into dollars.

Reliability of employer statistics—Since the estimates for employer establishments in these reports are based on the samples, they are subject to sampling variability and may be expected to differ from results which would have been obtained if a complete census had been taken using the same forms and procedures. The sampling errors shown in the tables were estimated directly from the sample reports, using methods appropriate for the sample design and form of estimation used.

The relative standard error is a measure of sampling variability, i.e., the variation that might occur by chance because only a sample of the population is surveyed. As calculated for this report, the relative standard error also partially reflects the effect of random errors of response and processing, but it does not take into account the effect of any consistent biases due to those types of errors. The chances are about 68 out of 100 that an estimate from the

sample would differ from a complete census by less than the relative standard error. The chances are about 95 out of 100 that the difference is less than twice the relative standard error and about 99 out of 100 that it is less than 2-1/2 times the relative standard error. Individual estimates with large relative standard errors have been shown in the published tables. Any such estimates should be used with caution. The very large relative standard errors generally occur for the smaller estimates.

Relative standard errors have been calculated for all of the published statistics, although they are shown for each statistic only in the tables presenting detailed statistics. Other tables show relative standard errors only for certain characteristics because of lack of space.

As calculated for this report, the relative standard error measures certain nonsampling errors, but does not measure any systematic biases in the data. Bias is the difference, averaged over all possible samples with the same size and design, between the estimates and the true value being estimated. Nonsampling errors can be attributed to many sources: inability to obtain information about all cases in the sample; definitional difficulties; differences in interpretation of questions; inability or unwillingness of respondents to provide correct information; and errors made in processing the data. Although no direct measurements of the biases have been obtained, it is believed that most of the important response and operational errors were detected in the course of reviewing the data for reasonableness and consistency.

A potential source of bias is in the imputation for those establishments that have not responded by the time of final publication. Data were estimated for establishments that did not report by that date, although selected establishments were contacted again to obtain as much information on the telephone as possible. Some publication cells in which more than 40 percent of the data were not reported have been suppressed.

Nonemployer Companies

As described earlier, the information derived from the business income tax returns of all companies was matched to the census employer file on the basis of common identification numbers. Those business income tax returns which could not be matched, were further classified on the basis of several characteristics. Returns with characteristics consistent with companies without payroll were treated as nonemployers. The nonemployer construction companies were not required to file census reports.

For "number of establishments," each separate income tax return was assumed to be an establishment. "All business receipts" was based on receipts information reported on the tax return.

Since no sampling was involved in the nonemployer establishments, the statistics for nonemployers are not subject to sampling variability. However, these data are subject to an unknown amount of reporting and processing errors which could not be detected by the Census Bureau.

CENSUS REPORT FORMS

Information for the 1987 Census of Construction Industries was obtained from employer establishments primarily through the use of twenty-four questionnaires, determined by industry classification and size. Standard forms and short forms were developed for each of the following SIC groups: 15, 16, 171, 172, 173, 174, 175, 176, 177, 178, and 179 and for the establishments classified in SIC 6552. Establishments with 50 or more employees all received the standard form. A sub-sample of establishments with fewer than 50 employees received short forms instead of the standard forms. The short forms covered only major items and omitted some of the detail found in the longer forms.

In reviewing and developing the questionnaires, comments and recommendations were elicited from construction trade associations and appropriate advisory groups. The Bureau surveyed several thousand firms representing all economic activities to gain insight into the way companies maintain records and to see whether new information could be collected.

DATA PROCESSING

The 1987 census report forms were mailed out in December 1987. They were mailed from and returned to the Census Bureau's Data Preparation Division in Jeffersonville, Ind., where routine editing and coding of the report forms were also accomplished. Collection of these report forms was essentially completed in July 1988.

The returned reports underwent extensive processing. A preliminary edit done at the time of data entry identified obviously deficient reports and reports needing clarification. When necessary, these problems were resolved by further contact with the respondents. Next, the data were transmitted to Census Bureau headquarters near Washington, DC.

Data records, then, underwent a detailed computer review and analysis. The records containing significant problems were referred for further analytical review and, if necessary, contacts were made with the respondents. The computer performed most classification coding (such as industry coding, geographic coding, and size coding), and imputation for missing items or for reports not received in time for tabulation. The imputation was performed on an industry (or industry group)-State (or geographic group) basis using all available response and administrative data.

The data records were then tabulated on an industry basis. Industry totals were subjected to analytical review, and selected statistics were prepared for the preliminary reports. Corrections resulting from this review were made to the computer records and final tabulations were produced.

The review of a preliminary report for an industry often uncovered the need for corrections or revisions to the data for another industry for which a preliminary report had already been published. The final reports incorporate all

revisions and corrections made during the review of the preliminary reports and contain considerable more data than were published in those reports.

GEOGRAPHIC CLASSIFICATION

Information for the 1987 Census of Construction Industries' final industry report series is classified on the basis of two types of geographic distributions: (1) physical location of the establishment, and (2) location of construction work. A separate code was assigned on each basis allowing us to present data by both physical locations of the establishment and location of construction work.

The geographic area reports series presents similar data by industry for each State (physical location of the establishment) and for selected MSA's, CMSA's and PMSA's.

DUPLICATION IN VALUE OF CONSTRUCTION WORK

The aggregate of value of construction work reported by all construction establishments in each of the several industry, geographic area, or other groupings in this census, contains varying amounts of duplication, since the construction work of one firm may be subcontracted to other construction firms and also be included in the subcontractors' value of construction work. To avoid this duplication, a "net" value of construction work figure has been derived for each establishment by subtracting the costs for construction work subcontracted to others from the value of construction work.

Duplication in value of business between other construction and nonconstruction industries, results from the use of products of these other industries as input materials by construction establishments. "Value added," avoids this duplication and is, for most purposes, the best measure for comparing the relative economic importance of industries or areas. "Value added," is defined in the 1987 Census of Construction Industries as equal to dollar value of business done less costs for construction work subcontracted to others and payments for materials, components, supplies, and fuels. However, for SIC 6552 and SIC 1531 where land receipts are significant, land receipts are also subtracted from dollar value of business done.

SPECIAL TABULATIONS

Special tabulations of data collected in the 1987 Census of Construction Industries may be obtained on computer tape or in tabular form. The data will be in summary form and subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) as are the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact and detailed specifications of the type and format of the data to be provided, should be directed to the Chief, Construction Statistics Division, Bureau of the Census, Washington, DC, 20233.

To discuss a special tabulation before submitting specifications, call 301-763-7546.

COMPARABILITY OF CENSUS OF CONSTRUCTION INDUSTRIES DATA WITH OTHER DATA

Data contained in the reports of the 1987 Census of Construction Industries are not the same as the data published in the Census Bureau's monthly Construction Reports, Series C30, Value of New Construction Put in Place. The main difference is that the C30 series covers all new construction put in place without regard to who is performing the construction activity, whereas the construction census figures cover both new construction and maintenance and repair work done by establishments classified in the construction industry. Significant amounts of construction are done by establishments classified outside of construction (in real estate, manufacturing, utilities and communications, for example), both as "force account" construction and construction done for others. In addition, the value in place series includes construction-related expenses such as architectural and engineering costs and the costs of materials supplied by owners which are normally not reflected in the Census of Construction.

Data contained in the reports of the census of construction industries may also differ from industry data in "Employment and Earnings Statistics," published by the Bureau of Labor Statistics, and "Statistics of Income," published by the Internal Revenue Service. These differences arise from varying definitions of scope, coverage, timing, classification, and methodology.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used in this publication:

- * Sampling error exceeds 40 percent.
- ** Represents the sum of all employees during pay periods including 12th of March, May, August, and November, divided by 4.
- Represents zero.
- † Represents value of construction work less costs for construction work subcontracted to others. (See Duplication in Value of Construction Work.)
- †† Represents dollar value of business done less costs for construction work subcontracted to others, and costs for materials, components, supplies, and fuels. In SIC's 1531 and 6552, land receipts are also subtracted from dollar value of business done. (See Duplication in Value of Construction Work.)
- (D) Withheld to avoid disclosing data for individual companies; data are included in higher level totals.
- (NA) Not available.
- (S) Withheld because estimate did not meet publication standards on the basis of either the response rate, associated relative standard error, or a consistency review.
- (W) Greater than zero but less than 1 percent.
- (X) Not applicable.
- n.s.k. Not specified by kind.

Users' Guide for Locating Statistics in This Report by Table Number

Statistics	For U.S.	By State	By employment size	By size class of dollar value of business done	By type, class, ownership, kind of business, and location of construction ¹	By specialization in types of construction
Assets and depreciation (gross book value):						
Beginning of year—buildings, machinery and equipment.....	3					
End of year—total.....	1, 3	1	5	6		
End of year—buildings, machinery and equipment.....	3					
Depreciation charges during year—buildings, machinery and equipment.....	3					
Capital expenditures:						
Total capital expenditures.....	1, 3	1	5	6		
New buildings—machinery and equipment.....	3					
Used buildings—machinery and equipment.....	3					
Communication services, costs for.....	2					
Employees:						
All employees—average number.....	1, 2	1	5	6		8
Construction workers—average number.....	1, 2, 9	1, 9				
Other employees—average number.....	2					
Employer costs for fringe benefits—legally required and voluntary expenditures.....	2					
Establishments—number in business during year.....	1, 2, 4, 9	1, 9	5	6		8
Hours—construction workers:						
Total.....	1, 2, 9	1, 9	5	6		
Quarterly.....	2, 9	9				
Inventories.....	4					
Materials, components, supplies, and fuels—costs for.....	1, 2	1	5	6		
Payroll:						
First quarter, all employees.....	2					
Annual:						
All employees.....	1, 2	1	5	6		8
Construction workers.....	1, 2	1				
Other employees.....	2					
Power, fuels, and lubricants—costs for.....	2					
Proprietors and working partners.....	2					
Ratios, State.....	13	13				
Value and receipts:						
Dollar value of business done, total.....	2		5	6	11	
Value of construction work, total.....	1, 2, 4	1	5	6	2, 7, 10	8
For work subcontracted in from others.....	2					
Other business receipts and land receipts ²	2					
Net value of construction work.....	1, 2	1	5	6		8
Value added.....	1, 2	1	5	6		8
Rental costs:						
Total.....	1, 2	1	5	6		
For machinery and equipment.....	2					
For buildings.....	2					
Repairs to buildings and other structures.....	2					
Repairs to machinery and equipment.....	2					
Selected industry ratios.....	12					
Subcontract work to others, costs for.....	1, 2	1	5	6		8

Note: Data for 1982 and earlier years are also available in some of these tables.

¹Type—buildings, roads, etc. Class—new construction; additions, alterations, or reconstruction; or maintenance and repair work. Ownership—private or government owned.

²Land receipts are shown separately for SIC's 1531 and 6552 only.

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Water, Sewer, Pipeline, and Communications and Powerline Construction

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SUMMARY OF FINDINGS

Establishments classified in this industry are primarily engaged in the construction of pipelines, communication and powerlines, and sewer and water mains. It also includes construction of pumping stations, television and radio towers, and telephone lines. For additional examples, refer to the 1987 Standard Industrial Classification (SIC) Manual published by the Office of Management and Budget, Executive Office of the President.

During 1987, the establishments with paid employees classified in this industry accounted for \$17.3 billion in total dollar value of business. Of this amount, \$17.0 billion were for the value of construction work. These establishments paid out \$4.7 billion for materials, components, and supplies and \$2.0 billion for construction work subcontracted to others. Costs for selected power, fuels, and lubricants for this industry were \$476 million. Value added for 1987 was \$10.1 billion.

There were 9,919 establishments with total employment averaging 197,632 during the year. Total payroll for 1987 was \$4.5 billion. Total hours worked by construction workers during the year were 309 million hours.

Larger establishments with 20 employees or more, while representing only 25 percent of the total number of employer establishments in this industry accounted for 75 percent of all business done.

A "construction establishment" is defined as a relatively permanent office, or other place of business, where the usual business activities related to construction are conducted. A separate census report was required from each sampled establishment covering domestic operations. Separate reports were not, however, required for each project or construction site.

In 1987, the value of construction work was collected to better measure actual construction activity done during the year. Construction receipts, as reported in earlier censuses, may have included the value of work done before or after the calendar year and may have excluded the value of work in progress during the calendar year. Receipts may have also excluded work done by builders engaged in construction for sale on their own account or for their own use. All dollar values are shown in current dollars for the years specified and have not been adjusted for inflation.

The data in this report are estimated from a sample survey and are subject to sampling variability as well as errors of response and nonreporting. The relative standard error shown in the tables is a measure of sampling variability. Descriptions of the sampling, estimating procedures, and data reliability are included in the Introduction.

Figure 1. **Value of Construction Work by Type of Construction**
(Percent)

1987
1982

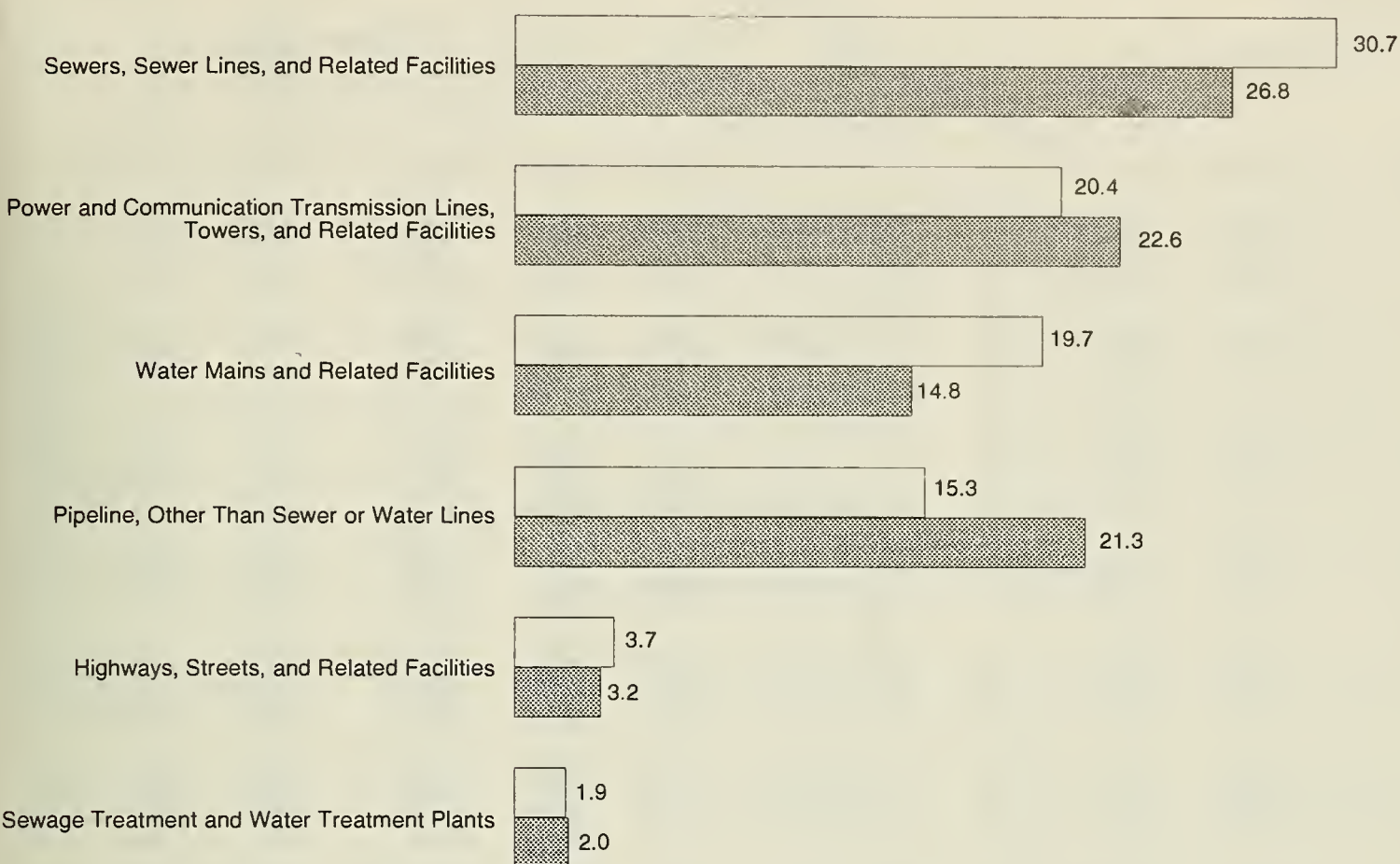


Figure 2. **Selected Costs Per Dollar Value of Business Done**
(Percent)

1987
1982

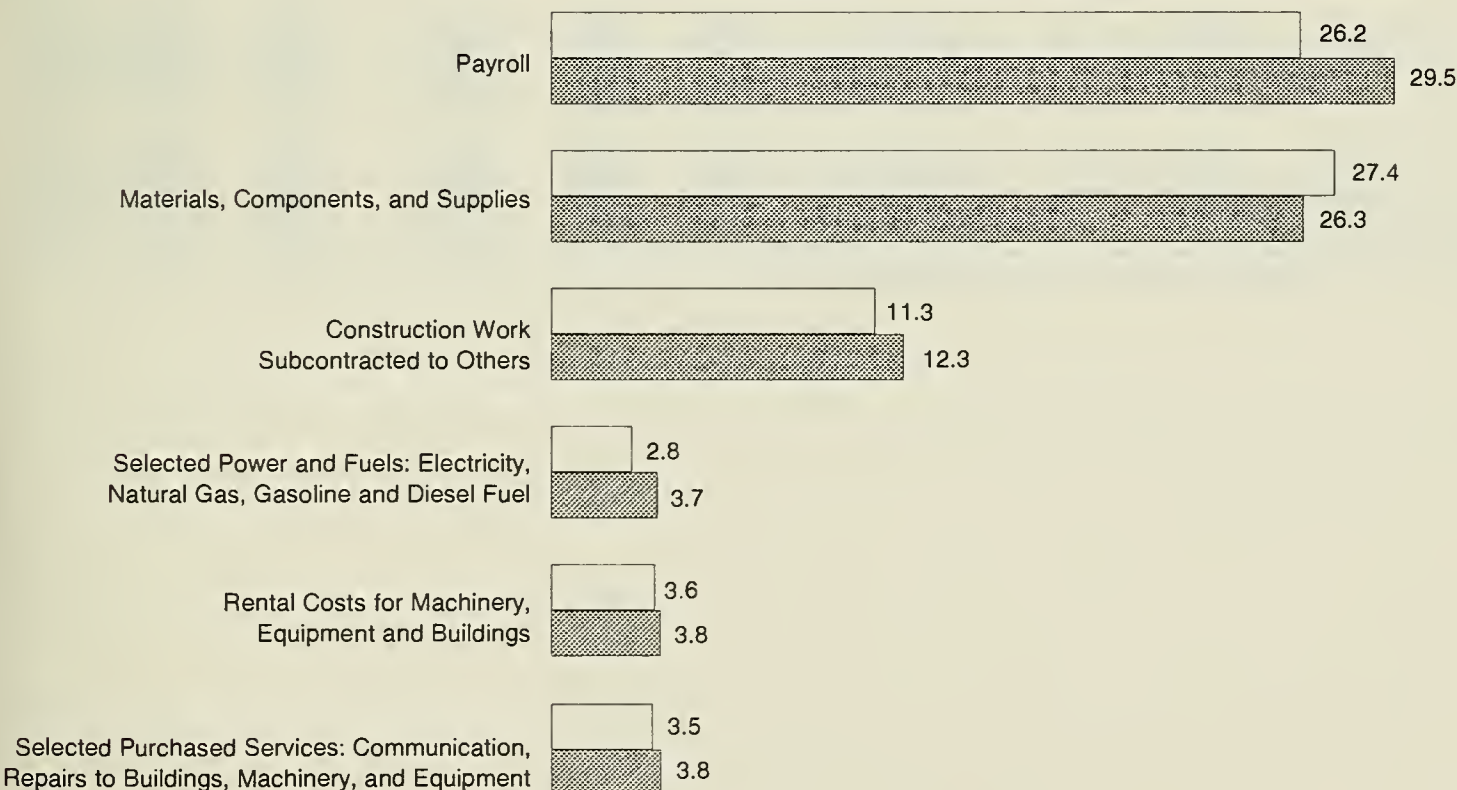


Table 1. General Statistics for Establishments With Payroll by State: 1987 and 1982

(Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes)

Location of establishment	1987							
	Number of establishments	Employees**		Payroll		Construction worker hours (thousands)	Value of construction work	Net value of construction work†
		All	Construction workers	All employees	Construction workers			
A	B	C	D	E	F	G	H	
United States	9 919	197 632	165 879	4 513 295	3 427 722	309 168	17 010 019	15 055 297
Alabama	182	3 519	3 020	60 451	48 195	6 188	229 765	204 303
Alaska	50	969	820	29 605	24 586	1 519	138 542	123 140
Arizona	107	2 812	2 340	68 860	47 521	4 210	232 527	211 850
Arkansas	145	1 777	1 482	28 702	22 896	3 063	125 741	111 046
California	1 063	19 119	16 023	519 083	397 383	27 199	2 101 952	1 877 640
Colorado	170	3 928	3 148	87 278	63 051	5 811	301 407	258 389
Connecticut	119	2 303	1 855	56 080	42 506	3 475	214 898	195 624
Delaware	12	970	837	17 859	14 887	1 540	56 613	45 766
District of Columbia	4	50	43	1 003	809	69	2 716	2 476
Florida	545	13 953	11 761	252 255	190 909	22 304	1 031 670	901 680
Georgia	337	7 813	6 768	153 284	118 731	13 001	846 225	742 634
Hawaii	24	626	517	17 940	14 486	971	76 797	64 902
Idaho	67	591	489	10 646	8 287	769	35 480	31 897
Illinois	345	5 715	4 612	171 968	120 933	8 520	657 443	561 886
Indiana	206	5 410	4 545	134 066	95 101	7 871	356 448	326 557
Iowa	111	1 040	867	20 624	16 015	1 724	100 392	86 524
Kansas	193	1 904	1 542	37 877	28 904	2 850	156 902	140 438
Kentucky	158	2 250	1 887	39 767	31 514	3 405	169 508	146 217
Louisiana	194	4 035	3 365	77 752	59 296	6 036	273 229	247 628
Maine	68	932	782	25 284	20 236	1 712	103 797	85 675
Maryland	182	4 568	3 839	96 163	73 826	7 498	320 870	288 138
Massachusetts	245	3 378	2 711	95 696	69 327	5 136	358 332	322 497
Michigan	291	4 811	4 013	128 486	96 660	7 549	505 274	439 156
Minnesota	228	3 427	2 825	92 925	70 771	5 479	447 500	362 336
Mississippi	74	2 583	2 290	42 459	31 815	4 027	142 412	127 291
Missouri	182	2 966	2 507	69 083	51 247	4 368	272 319	241 960
Montana	57	662	510	15 699	11 426	842	56 186	49 920
Nebraska	44	1 388	1 165	27 908	21 095	1 941	75 620	70 525
Nevada	43	666	546	18 629	13 449	929	69 641	64 479
New Hampshire	57	776	659	19 075	15 508	1 304	64 422	60 227
New Jersey	222	5 343	4 434	163 803	126 103	8 172	547 106	485 996
New Mexico	66	1 820	1 474	35 054	25 992	3 039	136 787	122 492
New York	405	6 771	5 621	186 407	136 044	10 714	682 317	627 230
North Carolina	373	10 347	9 019	203 350	161 083	17 019	678 904	594 357
North Dakota	40	397	319	7 738	5 492	775	29 751	27 310
Ohio	334	6 402	5 395	158 495	125 038	9 953	581 918	521 215
Oklahoma	212	3 097	2 595	82 324	65 385	4 871	224 745	207 019
Oregon	119	1 458	1 189	32 503	24 276	1 864	126 868	105 140
Pennsylvania	292	8 888	7 375	226 202	172 976	14 151	695 293	638 537
Rhode Island	35	686	550	14 771	11 270	1 089	62 913	55 472
South Carolina	146	3 170	2 712	53 411	41 474	5 314	184 473	162 987
South Dakota	52	382	301	6 449	4 774	573	27 659	26 223
Tennessee	191	4 424	3 715	80 319	61 639	7 037	372 000	323 124
Texas	977	18 995	15 940	391 660	298 985	30 746	1 480 544	1 301 322
Utah	85	1 321	1 075	28 471	22 593	1 820	108 597	94 765
Vermont	39	379	315	7 487	5 996	679	27 121	23 773
Virginia	245	9 849	8 529	192 408	145 735	16 281	677 443	599 877
Washington	275	3 143	2 578	81 804	61 573	4 334	355 794	301 863
West Virginia	88	1 769	1 544	36 626	29 872	2 908	100 584	95 810
Wisconsin	171	3 500	2 954	96 133	70 811	5 616	327 181	297 197
Wyoming	29	528	453	11 353	9 220	877	57 373	50 766

†In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

1987—Con.						1982			Relative standard error of estimate (percent) for column—			Location of establishment
Value added††	Cost of materials, components, supplies, and fuels	Cost of construction work sub-contracted to others	Rental cost for machinery, equipment, and buildings	Capital expenditures, other than land	End-of-year gross book value of depreciable assets	All employees**	Total construction receipts¹	Value added††				
I	J	K	L	M	N	O	P	Q	B	H	M	
10 089 749	5 210 516	1 954 721	625 417	695 713	4 993 249	186 674	11 952 831	7 005 322	1	1	2	U.S.
133 635	71 471	25 462	9 144	10 038	116 238	3 147	145 801	74 374	4	5	18	AL
84 069	40 544	15 401	3 792	1 589	22 719	1 546	154 356	80 019	4	5	5	AK
138 571	76 711	20 677	11 552	4 285	61 084	1 745	127 587	64 390	5	5	7	AZ
67 844	44 784	14 694	3 460	5 490	47 714	1 791	86 331	51 796	7	9	21	AR
1 238 137	672 444	224 312	100 414	54 754	371 977	15 421	1 332 858	791 178	2	1	5	CA
172 548	92 156	43 018	16 566	10 770	101 377	4 351	247 420	153 118	6	3	11	CO
139 151	59 770	19 273	9 781	10 927	71 123	1 238	72 833	42 568	4	4	12	CT
33 831	(D)	10 847	772	5 689	25 838	645	33 545	22 827	3	3	5	DE
1 658	818	240	113	(D)	(D)	(D)	(D)	(D)	(W)	(W)	(D)	DC
579 351	345 903	129 990	34 290	45 612	275 897	10 694	619 184	321 207	2	2	4	FL
508 260	240 981	103 591	21 336	36 275	212 156	7 823	378 293	194 825	2	2	8	GA
40 167	25 758	11 894	5 182	(D)	(D)	464	36 289	20 886	8	4	(D)	HI
22 939	9 841	3 583	1 258	*1 940	11 457	925	44 487	22 577	17	15	50	ID
353 466	213 634	95 557	16 178	23 232	184 947	6 659	454 565	274 470	5	3	8	IL
224 446	113 433	29 890	10 423	16 228	98 080	2 958	175 035	106 651	2	3	9	IN
58 734	28 461	13 867	2 710	4 183	35 682	1 568	104 349	49 494	9	7	24	IA
82 979	58 369	16 464	6 468	7 243	58 811	2 301	151 009	77 523	7	5	14	KS
90 438	56 271	23 291	5 249	10 468	52 136	2 018	105 158	63 586	7	5	15	KY
166 885	84 100	25 601	11 028	7 136	90 817	7 626	516 145	334 932	4	4	21	LA
61 580	25 595	18 121	4 510	8 773	47 548	873	75 847	39 940	9	6	11	ME
187 042	104 774	32 731	9 765	14 513	99 323	2 978	154 136	86 233	3	3	7	MD
224 219	103 131	35 834	15 966	16 035	96 794	2 880	193 708	109 390	4	4	12	MA
282 096	165 565	66 118	16 751	21 039	133 114	3 711	294 138	165 762	3	3	9	MI
223 667	140 527	85 163	13 036	16 907	112 701	3 017	256 502	124 590	3	3	10	MN
88 670	43 046	15 120	4 518	9 188	104 264	3 009	111 097	50 860	3	4	5	MS
156 472	87 243	30 358	5 491	12 245	82 031	3 485	229 767	152 514	7	3	9	MO
34 282	18 514	6 266	1 676	1 476	29 898	756	54 147	30 843	6	9	9	MT
34 900	35 695	5 095	2 199	1 506	13 515	989	80 558	50 239	4	4	36	NE
41 770	23 665	5 161	3 661	*2 703	18 533	539	55 610	28 407	8	5	52	NV
40 062	(D)	4 195	3 293	(D)	27 672	369	15 914	10 743	9	10	(D)	NH
348 243	141 816	61 110	24 721	21 933	156 061	4 731	418 337	270 835	3	2	7	NJ
82 101	41 923	14 295	6 320	2 688	47 769	2 315	120 830	82 133	5	7	5	NM
445 462	187 948	55 087	27 466	27 338	156 307	6 723	563 262	334 879	3	3	13	NY
413 071	189 506	84 547	14 743	46 607	271 383	7 104	358 661	123 982	2	3	5	NC
17 308	10 372	2 440	1 271	2 672	24 058	440	34 327	19 801	20	15	34	ND
360 060	169 166	60 702	18 056	24 441	180 759	6 646	384 650	242 828	2	2	6	OH
164 829	44 498	17 726	11 403	8 395	109 511	5 639	272 918	170 602	5	3	17	OK
64 772	41 517	21 727	5 371	4 020	25 876	2 140	147 553	103 536	6	8	21	OR
474 065	192 301	56 755	22 948	37 318	191 498	9 373	572 710	377 648	2	2	6	PA
36 510	19 446	7 440	1 534	2 525	16 114	(D)	(D)	(D)	8	6	8	RI
114 204	53 247	21 486	5 986	12 026	65 293	2 524	118 086	72 745	5	4	10	SC
16 441	10 602	1 435	708	*1 181	11 942	404	25 774	16 060	17	15	48	SD
203 684	122 915	48 876	12 056	18 094	98 757	3 444	191 511	95 760	3	5	14	TN
833 497	482 683	179 222	72 796	34 096	452 366	23 740	1 467 597	922 570	2	2	6	TX
62 338	34 140	13 831	5 043	3 737	34 992	989	74 537	38 803	12	7	10	UT
17 261	7 450	3 348	974	1 302	10 469	356	19 296	11 593	16	9	32	VT
412 314	193 723	77 565	14 727	47 440	233 880	5 599	257 999	152 429	2	2	6	VA
196 174	110 800	53 930	14 476	12 033	106 282	3 150	228 019	125 730	4	3	10	WA
77 029	22 531	4 773	3 794	3 130	36 958	2 092	100 843	72 667	4	4	20	WV
203 108	99 317	29 984	8 932	19 282	121 135	2 581	200 115	118 394	2	2	4	WI
35 387	16 816	6 606	1 489	1 134	17 343	864	63 556	41 540	8	3	25	WY

Table 2. Detailed Statistics for Establishments With Payroll: 1987 and Earlier Census Years

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendices]

Item	1987	1982	1977	1972	Relative standard error of estimate (percent)			
					1987	1982	1977	1972
Number of establishments in business during year	9 919	9 413	10 227	9 355	1	1	2	3
Proprietors and working partners	1 726	2 132	4 035	4 360	6	4	4	5
All employees**	197 632	186 674	198 354	209 318	1	(W)	1	1
Construction workers:								
March	143 795	141 459	145 807	156 153	1	(W)	1	1
May	166 855	164 683	173 244	180 977	1	(W)	1	1
August	179 450	174 921	191 548	207 312	1	(W)	1	1
November	173 426	157 412	181 368	187 857	1	1	1	1
Average	165 879	160 473	173 093	184 199	1	(W)	1	1
Other employees:								
March	31 509	26 080	24 839	24 238	1	1	1	1
May	31 506	(NA)	(NA)	(NA)	1	1	(NA)	(NA)
August	32 047	(NA)	(NA)	(NA)	1	1	(NA)	(NA)
November	31 947	(NA)	(NA)	(NA)	1	1	(NA)	(NA)
Average	31 753	(NA)	(NA)	(NA)	1	1	(NA)	(NA)
Construction worker hours (thousands):								
January to March	64 073	62 305	(NA)	(NA)	1	1	(NA)	(NA)
April to June	77 538	76 524	(NA)	(NA)	1	(W)	(NA)	(NA)
July to September	86 365	83 063	(NA)	(NA)	1	1	(NA)	(NA)
October to December	81 190	72 155	(NA)	(NA)	1	(W)	(NA)	(NA)
Total hours worked	309 168	294 048	(NA)	(NA)	1	(W)	(NA)	(NA)
Payroll, all employees	4 513 295	3 576 338	2 837 270	2 154 000	(W)	(W)	(W)	1
Payroll, construction workers	3 427 722	2 906 789	2 347 495	1 798 102	(W)	(W)	(W)	1
Payroll, other employees	1 085 573	669 549	489 775	355 898	1	(W)	(W)	1
First quarter payroll, all employees	920 498	737 855	523 281	(NA)	1	(W)	(W)	(NA)
Employer costs for fringe benefits, all employees	1 035 877	634 002	580 131	(NA)	1	(W)	(W)	(NA)
Legally required expenditures	752 744	492 489	329 226	(NA)	1	(W)	(W)	(NA)
Voluntary expenditures	283 132	141 512	250 905	(NA)	1	1	(W)	(NA)
Dollar value of business done	17 254 987	12 128 956	9 553 498	6 369 576	1	(W)	(W)	1
Value of construction work ¹	17 010 019	11 952 831	9 361 092	6 227 482	1	(W)	(W)	1
Value of construction work subcontracted in from others	3 419 333	1 497 843	1 455 661	753 011	2	2	1	3
Land receipts ²	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Other business receipts	244 968	176 125	192 406	142 094	2	1	1	4
Net value of construction work†	15 055 297	10 462 441	8 371 028	5 628 010	1	(W)	(W)	1
Value added††	10 089 749	7 005 322	5 522 719	3 869 700	1	(W)	(W)	1
Selected costs	7 165 237	5 123 633	4 030 779	2 499 876	1	1	(W)	1
Materials, components, and supplies ³	4 734 144	3 189 912	2 798 430	1 900 404	1	1	(W)	1
Construction work subcontracted to others	1 954 721	1 490 389	990 064	599 472	1	1	(W)	1
Selected power, fuels, and lubricants	476 371	443 331	242 285	(NA)	1	1	1	(NA)
Electricity	32 128	27 432	15 966	(NA)	1	1	1	(NA)
Natural gas	7 666	7 559	6 316	(NA)	3	2	2	(NA)
Gasoline and diesel fuel	400 312	382 139	192 902	(NA)	1	1	1	(NA)
On highway use	209 814	(NA)	(NA)	(NA)	1	(NA)	(NA)	(NA)
Off highway use	190 498	(NA)	(NA)	(NA)	1	(NA)	(NA)	(NA)
Other, including lubricating oils and greases	36 264	26 200	27 119	(NA)	1	1	1	(NA)
Rental cost for machinery, equipment, and buildings	625 417	458 027	364 617	(NA)	1	1	1	(NA)
For machinery and equipment	557 613	409 955	343 490	260 159	1	1	1	1
For buildings	67 804	48 072	21 126	(NA)	2	1	1	(NA)
Selected purchased services	596 515	461 655	356 533	(NA)	1	1	1	(NA)
Communication services	61 144	46 741	29 195	(NA)	1	1	1	(NA)
Repairs to buildings and other structures	17 192	12 677	9 394	(NA)	3	2	3	(NA)
Repairs to machinery and equipment	518 178	402 236	317 944	(NA)	1	1	1	(NA)
Ownership of construction projects:								
Value of construction work ¹	17 010 019	11 952 831	9 361 092	6 227 482	1	(W)	(W)	1
Government owned	6 290 814	4 468 103	4 068 001	3 230 567	1	1	1	1
Federal	972 755	(NA)	(NA)	(NA)	3	(NA)	(NA)	(NA)
State and local	5 318 059	(NA)	(NA)	(NA)	1	(NA)	(NA)	(NA)
Privately owned	10 719 204	7 484 727	5 293 091	2 996 915	1	1	1	1

¹In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

²Data were collected separately for establishments classified in SIC 1531, Operative Builders, and SIC 6552, Subdividers and Developers, Except Cemeteries. For all other industries, data are included in other business receipts.

³For 1972, includes data for power, fuels, and lubricants.

Table 3. **Assets, Capital Expenditures, and Depreciation for Establishments With Payroll: 1987 and 1982**

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	1987	1982	Relative standard error of estimate (percent)	
			1987	1982
BUILDINGS AND OTHER STRUCTURES, MACHINERY, AND EQUIPMENT				
Beginning-of-year gross book value of depreciable assets -----	4 595 077	4 434 824	1	1
Capital expenditures, other than land -----	695 713	469 328	2	1
New -----	557 809	337 585	2	1
Used -----	137 903	131 743	3	1
Retirements and disposition of depreciable assets -----	297 541	201 551	4	1
End-of-year gross book value of depreciable assets -----	4 993 249	4 702 601	1	1
Depreciation charges during year -----	628 401	615 684	1	1
Buildings and other Structures, Additions, and Related Facilities				
Beginning-of-year gross book value of depreciable assets -----	416 692	341 654	2	2
Capital expenditures, other than land -----	62 300	34 629	3	2
New buildings and other structures -----	49 080	29 708	3	1
Used buildings and other structures -----	13 219	4 920	8	11
Retirements and disposition of depreciable assets -----	24 736	9 321	8	2
End-of-year gross book value of depreciable assets -----	454 256	366 962	2	1
Depreciation charges during year -----	54 675	35 348	3	3
Machinery and Equipment				
Beginning-of-year gross book value of depreciable assets -----	4 178 385	4 093 170	1	1
Capital expenditures, other than land -----	633 412	434 699	2	1
New machinery and equipment, including automobiles and trucks -----	508 728	307 876	2	1
New automobiles and trucks, intended primarily for highway use -----	174 039	98 219	2	1
Used machinery and equipment, including automobiles and trucks -----	124 683	126 822	3	1
Retirements and disposition of depreciable assets -----	272 805	192 230	4	1
End-of-year gross book value of depreciable assets -----	4 538 992	4 335 639	1	1
Depreciation charges during year -----	573 726	580 335	1	1

Table 4. Value of Inventories for Establishments With Payroll: 1987 and 1986

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Establishments with payroll	Relative standard error of estimate (percent)
All establishments:		
Number	9 919	1
Value of construction work	17 010 019	1
Establishments with inventories:		
Number	2 821	4
Value of construction work	5 902 044	1
Inventories ¹ :		
End of 1987, materials and supplies	103 482	3
End of 1986, materials and supplies	88 203	3
Establishments with no inventories:		
Number	5 654	3
Value of construction work	7 996 772	1
Establishments not reporting:		
Number	1 444	5
Value of construction work	3 111 203	1

¹Inventories at cost or market prior to any adjustment to correct to LIFO values.

Table 5. Selected Statistics for Establishments With Payroll by Employment Size Class: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Selected statistics	Total	Establishments with an average of—								
		1 to 4 employees	5 to 9 employees	10 to 19 employees	20 to 49 employees	50 to 99 employees	100 to 249 employees	250 to 499 employees	500 to 999 employees	1,000 employees or more
1987										
Number of establishments -----	9 919	(S)	2 278	2 017	1 680	502	219	52	13	5
All employees** -----	197 632	(S)	15 223	27 250	50 720	33 558	31 526	16 575	8 928	7 088
Payroll, all employees -----	4 513 295	(S)	297 648	589 545	1 194 096	790 685	807 812	379 719	178 308	173 529
Construction worker hours (thousands) -----	309 168	(S)	20 677	39 356	80 298	56 497	52 333	27 053	12 915	11 592
Dollar value of business done -----	17 254 987	(S)	1 231 859	2 482 773	4 766 651	3 050 734	2 831 209	<u>2 364 058</u>	(D)	(D)
Value of construction work ¹ -----	17 010 019	(S)	1 218 347	2 451 301	4 710 458	3 007 551	2 792 680	1 214 780	<u>1 091 951</u>	(D)
Net value of construction work† -----	15 055 297	(S)	1 082 604	2 206 320	4 146 577	2 637 755	2 388 199	1 096 754	<u>1 021 710</u>	(D)
Value added†† -----	10 089 749	(S)	699 203	1 430 189	2 666 898	1 743 044	1 652 882	838 111	452 534	301 796
Cost of materials, components, supplies, and fuels -----	5 210 516	(S)	396 913	807 603	1 535 871	937 893	773 846	<u>583 350</u>	(D)	(D)
Cost of construction work subcontracted to others -----	1 954 721	(S)	135 743	244 980	563 881	369 796	404 480	118 026	<u>70 241</u>	(D)
Rental cost for machinery, equipment, and buildings -----	625 417	(S)	45 125	87 619	166 420	127 818	121 023	42 390	<u>14 623</u>	5 185
Capital expenditures, other than land -----	695 713	(S)	60 684	115 181	196 800	<u>107 199</u>	97 555	39 597	<u>47 713</u>	(D)
End-of-year gross book value of depreciable assets -----	4 993 249	(S)	478 879	832 118	1 435 479	813 716	686 908	308 433	<u>224 369</u>	(D)
1982										
All employees** -----	186 674	7 510	13 863	24 661	42 302	32 332	30 877	15 171	12 176	7 782
Total construction receipts ¹ -----	11 952 831	424 971	823 382	1 531 151	2 927 285	2 151 505	2 110 393	973 509	647 622	363 012
Value added†† -----	7 005 322	242 808	454 076	866 721	1 631 861	1 217 373	1 331 059	673 905	351 225	236 293
1987 RELATIVE STANDARD ERROR OF ESTIMATE (PERCENT)										
All employees** -----	1	(S)	4	3	1	1	1	(W)	(W)	(W)
Net value of construction work† -----	1	(S)	4	2	1	(W)	(W)	(W)	(W)	(D)
Capital expenditures, other than land -----	2	(S)	10	6	3	1	1	(W)	(W)	(D)

Note: Underscored data fields include data from adjoining columns which have been withheld to avoid disclosing data for individual companies.

¹In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

Table 6. Selected Statistics by Size Class of the Dollar Value of Business Done for Establishments With Payroll: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Selected statistics	Total	Establishments with dollar value of business done									
		Less than \$25,000	\$25,000 to \$49,999	\$50,000 to \$99,999	\$100,000 to \$249,999	\$250,000 to \$499,999	\$500,000 to \$999,999	\$1,000,000 to \$2,499,999	\$2,500,000 to \$4,999,999	\$5,000,000 to \$9,999,999	\$10,000,000 or more
1987											
Number of establishments	9 919	(S)	(S)	(S)	1 758	1 699	1 617	1 817	974	447	278
All employees**	197 632	(S)	(S)	(S)	6 496	11 417	18 338	36 808	36 827	28 791	56 552
Payroll, all employees	4 513 295	(S)	(S)	(S)	82 236	183 392	348 643	772 835	882 163	721 785	1 496 911
Construction worker hours (thousands)	309 168	(S)	(S)	(S)	7 449	15 686	27 384	54 932	60 410	47 722	92 879
Dollar value of business done	17 254 987	(S)	(S)	(S)	284 288	609 199	1 159 522	2 897 736	3 404 210	3 082 496	5 747 215
Value of construction work ¹	17 010 019	(S)	(S)	(S)	281 462	602 781	1 148 538	2 864 154	3 350 312	3 038 635	5 655 580
Net value of construction work†	15 055 297	(S)	(S)	(S)	262 845	566 402	1 049 920	2 576 439	2 960 830	2 647 746	4 927 199
Value added††	10 089 749	(S)	(S)	(S)	185 583	399 180	717 008	1 688 410	1 955 721	1 703 250	3 396 889
Cost of materials, components, supplies, and fuels	5 210 516	(S)	(S)	(S)	80 087	173 639	343 897	921 611	1 059 007	988 356	1 621 945
Cost of construction work subcontracted to others	1 954 721	(S)	(S)	(S)	18 617	36 379	98 617	287 715	389 482	390 889	728 381
Rental cost for machinery, equipment, and buildings	625 417	(S)	(S)	(S)	9 523	19 937	39 700	100 208	133 299	118 064	202 233
Capital expenditures, other than land	695 713	(S)	(S)	(S)	18 768	37 005	61 607	134 657	134 296	119 878	187 788
End-of-year gross book value of depreciable assets	4 993 249	(S)	(S)	(S)	154 826	274 399	488 777	973 228	1 049 750	741 479	1 273 086
1982											
All employees**	186 674	(S)	766	2 776	8 482	12 886	20 377	37 012	30 624	25 017	48 156
Total construction receipts ¹	11 952 831	(S)	16 881	73 653	317 673	551 347	1 016 455	2 173 088	2 118 554	1 816 437	3 862 146
Value added††	7 005 322	(S)	10 203	44 521	202 572	341 270	601 472	1 231 750	1 177 016	1 047 596	2 345 053
1987 RELATIVE STANDARD ERROR OF ESTIMATE (PERCENT)											
All employees**	1	(S)	(S)	(S)	5	5	4	2	1	1	(W)
Net value of construction work†	1	(S)	(S)	(S)	5	5	4	2	1	1	(W)
Capital expenditures, other than land	2	(S)	(S)	(S)	13	12	8	5	3	2	(W)

Note: Underscored data fields include data from adjoining columns which have been withheld to avoid disclosing data for individual companies.

¹In earlier censuses construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

Table 7. Value of Construction Work for Establishments With Payroll by Type of Construction: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Type of construction	Value of construction work ¹				Relative standard error of estimate (percent) for column—			
	Total	New construction	Additions, alterations, or reconstruction ²	Maintenance and repair				
	A	B	C	D	A	B	C	D
1987								
Value of construction work ¹	17 010 019	12 838 852	2 182 059	1 569 178	1	1	1	1
Building construction	353 154	313 343	28 843	10 968	5	5	6	12
Nonbuilding construction	16 236 941	12 525 514	2 153 216	1 558 210	1	1	1	1
Highways, streets, and related facilities	633 580	448 506	133 629	51 445	1	1	1	2
Bridges, tunnels, and elevated highways	127 899	81 914	27 276	18 708	2	3	5	4
Conservation and development construction	68 458	51 311	13 078	4 068	4	5	7	15
Power and communication transmission lines, towers, and related facilities	3 473 127	2 456 175	501 621	515 331	1	1	2	1
Sewers, water mains, and related facilities	8 571 756	7 059 798	969 607	542 350	1	1	2	2
Sewers, sewer lines, and related facilities	5 213 772	4 293 077	588 749	331 945	1	1	2	2
Water mains and related facilities	3 357 984	2 766 720	380 857	210 405	1	1	2	3
Pipeline, other than sewer or water lines	2 598 987	1 851 459	393 416	354 111	1	1	2	3
Blast furnaces, petroleum refineries, and chemical complexes	31 231	17 219	7 050	6 961	2	4	2	2
Power plants	33 871	25 542	6 136	2 193	3	4	1	5
Sewage treatment and water treatment plants	329 366	266 187	47 266	15 912	2	2	4	3
Sewage treatment plants	209 733	175 816	26 072	7 845	2	2	4	3
Water treatment plants	119 632	90 371	21 194	8 067	4	3	6	6
Earthmoving, nonbuilding	115 699	98 828	10 511	6 359	4	4	11	8
Other nonbuilding construction	252 967	168 575	43 626	40 772	5	3	18	10
Construction work, n.s.k.	419 924	(NA)	(NA)	(NA)	4	(NA)	(NA)	(NA)
1982								
Value of construction work ¹	11 952 831	10 084 634	(NA)	1 868 196	(W)	(W)	(NA)	1
Building construction	182 070	160 212	(NA)	21 858	2	2	(NA)	4
Nonbuilding construction	11 296 242	9 507 813	(NA)	1 788 428	(W)	(W)	(NA)	1
Highways, streets, and related facilities	386 985	319 094	(NA)	67 890	1	1	(NA)	2
Bridges, tunnels, and elevated highways	95 422	68 369	(NA)	27 052	1	1	(NA)	(W)
Conservation and development construction	65 304	54 842	(NA)	10 462	2	1	(NA)	9
Power and communication transmission lines, towers, and related facilities	2 706 949	2 182 172	(NA)	524 777	1	1	(NA)	1
Sewers, water mains, and related facilities	4 962 852	4 376 089	(NA)	586 762	1	1	(NA)	1
Sewers, sewer lines, and related facilities	3 199 789	2 869 676	(NA)	330 112	1	1	(NA)	2
Water mains and related facilities	1 763 063	1 506 412	(NA)	256 650	1	1	(NA)	2
Pipeline, other than sewer or water lines	2 547 657	2 063 432	(NA)	484 224	(W)	(W)	(NA)	1
Heavy industrial facilities	104 679	81 147	(NA)	23 532	1	1	(NA)	3
Sewage treatment and water treatment plants	240 676	219 407	(NA)	21 268	1	1	(NA)	4
Sewage treatment plants	151 536	139 290	(NA)	12 246	1	1	(NA)	7
Water treatment plants	89 139	80 117	(NA)	9 022	3	3	(NA)	4
Other nonbuilding construction	185 718	143 261	(NA)	42 461	4	5	(NA)	4
Construction work, n.s.k.	474 518	416 607	(NA)	57 910	3	3	(NA)	3

¹In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

²In 1982, data for additions, alterations, or reconstruction were collected separately for SIC 1521, 1522, 1531, 1541, and 1542. For all other industries, data are included with "New construction."

Table 8. Selected Statistics for Establishments With Payroll by Specialization in Types of Construction: 1987

[Thousand dollars. Detail may not add to total due to rounding. This table presents selected statistics for establishments according to degree of specialization in major types of construction work. If number of establishments or value of construction work for a given type of specialization are relatively insignificant, data may not be shown. In addition, data are not shown in this table where distribution of the value of construction work by type of construction was not provided in table 7. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Number of establish- ments	All employees**	Payroll, all employees	Value of construction work		Net value of construction work†	Value added††	Cost of construction work sub- contracted to others	Relative standard error of estimate (percent) for column—		
				For all types	For specialized type				B	D	H
A	B	C	D	E	F	G	H				
All establishments -----	9 919	197 632	4 513 295	17 010 019	10 296 468	15 055 297	10 089 749	1 954 721	1	1	1
Establishments not specializing by type -----	2 280	48 346	1 141 083	5 152 052	(NA)	4 386 285	2 708 634	765 767	1	1	1
Establishments specializing 51 percent or more -----	7 638	149 286	3 372 212	11 857 966	10 296 468	10 669 012	7 381 115	1 188 954	1	1	1
POWER AND COMMUNICATION TRANSMISSION LINES, TOWERS, AND RELATED FACILITIES											
All establishments specializing in type -----	2 040	61 447	1 247 283	3 440 966	3 310 745	3 150 234	2 435 682	290 732	1	1	2
Establishments with —											
100 percent specialization -----	1 798	53 491	1 071 301	2 916 134	2 916 134	2 680 343	2 066 471	235 791	1	1	2
90 to 99 percent specialization -----	97	1 656	34 703	106 270	98 366	99 095	76 961	7 174	7	7	11
80 to 89 percent specialization -----	44	2 669	58 043	145 494	120 895	136 275	111 697	9 219	2	2	7
70 to 79 percent specialization -----	37	1 484	29 798	95 937	71 232	85 623	66 412	10 313	12	6	2
60 to 69 percent specialization -----	45	1 557	36 994	105 548	65 241	88 945	69 660	16 603	8	9	23
51 to 59 percent specialization -----	15	587	16 441	71 581	38 874	59 950	44 480	11 630	10	4	2
SEWERS, SEWER LINES, AND RELATED FACILITIES											
All establishments specializing in type -----	2 502	36 494	905 008	4 052 877	3 159 401	3 568 208	2 145 375	484 669	2	1	2
Establishments with —											
100 percent specialization -----	1 072	10 842	253 027	1 104 972	1 104 972	989 763	603 078	115 208	4	3	3
90 to 99 percent specialization -----	171	2 355	60 897	252 183	235 510	217 714	128 845	34 468	4	3	3
80 to 89 percent specialization -----	321	4 672	118 661	565 060	465 652	490 915	289 681	74 145	5	3	3
70 to 79 percent specialization -----	263	4 541	117 746	559 949	404 631	491 656	296 724	68 293	3	3	5
60 to 69 percent specialization -----	512	10 391	263 620	1 173 293	731 807	1 037 511	613 975	135 781	2	2	3
51 to 59 percent specialization -----	161	3 690	91 056	397 418	216 827	340 646	213 071	56 771	4	2	2
PIPELINE, OTHER THAN SEWER OR WATER LINES											
All establishments specializing in type -----	1 002	29 054	741 753	2 341 651	2 161 625	2 152 709	1 689 080	188 942	1	1	2
Establishments with —											
100 percent specialization -----	669	19 345	497 732	1 623 650	1 623 650	1 500 199	1 197 371	123 451	2	1	2
90 to 99 percent specialization -----	69	2 744	71 701	216 549	200 495	201 387	157 070	15 161	5	5	5
80 to 89 percent specialization -----	56	1 762	43 440	121 306	99 389	110 429	89 670	10 877	6	5	7
70 to 79 percent specialization -----	74	777	17 704	66 429	49 216	57 724	39 668	8 705	5	5	14
60 to 69 percent specialization -----	94	3 380	86 709	237 861	146 977	210 397	148 730	27 463	4	3	6
51 to 59 percent specialization -----	37	1 045	24 465	75 855	41 896	72 571	56 569	3 283	7	5	17
WATER MAINS AND RELATED FACILITIES											
All establishments specializing in type -----	1 177	14 606	341 493	1 498 960	1 173 791	1 324 278	788 887	174 682	3	2	3
Establishments with —											
100 percent specialization -----	434	3 802	87 673	373 910	373 910	327 083	209 375	46 827	6	5	4
90 to 99 percent specialization -----	135	1 861	47 679	220 514	205 736	189 952	112 905	30 561	9	6	7
80 to 89 percent specialization -----	94	1 048	26 098	109 905	89 882	100 136	52 709	9 769	8	8	13
70 to 79 percent specialization -----	187	2 462	54 401	239 206	172 887	213 496	117 061	25 710	7	6	6
60 to 69 percent specialization -----	229	3 636	85 981	374 373	232 646	331 251	200 783	43 121	5	5	8
51 to 59 percent specialization -----	95	1 794	39 659	181 049	98 727	162 357	96 052	18 691	8	7	9

Table 9. Quarterly Construction Worker Hours and Employment for Establishments With

[Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Location of establishment	Number of establishments	Average number of construction workers	Construction worker hours (thousands)	January to March		April to June	
				Construction workers ¹	Hours worked (thousands)	Construction workers ¹	Hours worked (thousands)
	A	B	C	D	E	F	G
United States	9 919	165 879	309 168	143 795	64 073	166 855	77 538
Alabama	182	3 020	6 188	2 812	1 423	3 034	1 592
Alaska	50	820	1 519	500	203	1 033	470
Arizona	107	2 340	4 210	2 103	949	2 092	893
Arkansas	145	1 482	3 063	1 363	718	1 543	814
California	1 063	16 023	27 199	14 006	5 845	15 603	6 653
Colorado	170	3 148	5 811	2 627	1 080	3 160	1 450
Connecticut	119	1 855	3 475	1 639	719	1 912	889
Delaware	12	837	1 540	650	298	821	365
District of Columbia	4	43	69	41	16	43	13
Florida	545	11 761	22 304	11 361	5 247	11 584	5 497
Georgia	337	6 768	13 001	5 852	2 739	7 157	3 291
Hawaii	24	517	971	459	224	479	224
Idaho	67	489	769	432	171	506	196
Illinois	345	4 612	8 520	3 502	1 536	4 785	2 179
Indiana	206	4 545	7 871	3 866	1 571	4 640	1 970
Iowa	111	867	1 724	638	255	927	467
Kansas	193	1 542	2 850	1 245	552	1 490	679
Kentucky	158	1 887	3 405	1 658	662	1 811	817
Louisiana	194	3 365	6 036	3 174	1 397	3 267	1 454
Maine	68	782	1 712	557	319	818	450
Maryland	182	3 839	7 498	3 504	1 590	3 807	1 845
Massachusetts	245	2 711	5 136	1 984	880	2 870	1 364
Michigan	291	4 013	7 549	2 917	1 281	4 117	1 856
Minnesota	228	2 825	5 479	1 536	659	3 159	1 507
Mississippi	74	2 290	4 027	1 858	835	2 279	960
Missouri	182	2 507	4 368	2 210	922	2 412	1 124
Montana	57	510	842	330	155	551	228
Nebraska	44	1 165	1 941	1 030	412	1 174	472
Nevada	43	546	929	485	216	513	215
New Hampshire	57	659	1 304	559	266	681	333
New Jersey	222	4 434	8 172	3 592	1 508	4 489	2 108
New Mexico	66	1 474	3 039	1 270	598	1 555	783
New York	405	5 621	10 714	4 358	1 965	5 940	2 852
North Carolina	373	9 019	17 019	8 434	3 689	8 879	4 288
North Dakota	40	319	775	230	113	285	169
Ohio	334	5 395	9 953	4 447	1 943	5 401	2 479
Oklahoma	212	2 595	4 871	2 031	903	2 822	1 284
Oregon	119	1 189	1 864	884	366	1 091	430
Pennsylvania	292	7 375	14 151	6 413	2 834	7 447	3 538
Rhode Island	35	550	1 089	446	207	562	277
South Carolina	146	2 712	5 314	2 557	1 225	2 778	1 354
South Dakota	52	301	573	231	80	258	133
Tennessee	191	3 715	7 037	3 444	1 557	3 885	1 848
Texas	977	15 940	30 746	15 879	7 434	15 867	7 554
Utah	85	1 075	1 820	905	363	1 096	494
Vermont	39	315	679	205	115	343	170
Virginia	245	8 529	16 281	7 812	3 530	8 449	4 169
Washington	275	2 578	4 334	2 134	840	2 461	1 023
West Virginia	88	1 544	2 908	1 113	517	1 552	700
Wisconsin	171	2 954	5 616	2 134	953	2 972	1 392
Wyoming	29	453	877	357	167	435	199

¹Construction workers during pay periods including 12th of March, May, August, and November.

Payroll by State: 1987

July to September		October to December		Relative standard error of estimate (percent) for column--										Location of establishment
Construction workers¹	Hours worked (thousands)	Construction workers¹	Hours worked (thousands)											
H	I	J	K	B	C	D	E	F	G	H	I	J	K	
179 450	86 365	173 426	81 190	1	1	1	1	1	1	1	1	1	1	U.S.
3 085	1 629	3 148	1 542	4	5	5	6	4	6	4	5	4	6	AL
950	449	798	397	4	4	1	1	1	1	5	5	11	11	AK
2 598	1 236	2 566	1 130	6	8	5	9	7	7	6	11	5	8	AZ
1 567	837	1 453	692	7	10	7	11	7	10	9	12	8	10	AR
17 351	7 465	17 134	7 234	2	2	2	2	2	2	2	2	2	2	CA
3 652	1 761	3 152	1 519	6	9	6	10	6	9	6	9	7	10	CO
1 984	945	1 886	920	3	4	3	4	3	4	3	4	3	5	CT
985	465	894	410	3	4	4	4	3	4	3	4	3	4	DE
47	20	42	18	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	DC
11 909	5 723	12 189	5 836	2	3	2	3	2	2	2	2	2	3	FL
6 642	3 389	7 422	3 580	2	4	3	5	2	4	2	3	2	4	GA
555	264	575	258	9	9	8	10	8	9	11	10	10	9	HI
493	194	525	206	16	19	17	20	16	21	18	21	16	18	ID
5 221	2 527	4 940	2 277	5	6	3	5	5	6	6	7	7	7	IL
4 988	2 270	4 684	2 059	2	3	2	3	3	3	2	3	3	4	IN
1 042	538	862	462	9	11	10	12	10	12	9	12	8	11	IA
1 742	825	1 690	793	7	8	9	9	9	9	7	8	6	8	KS
2 243	1 069	1 836	855	7	8	6	9	6	8	9	10	7	8	KY
3 648	1 693	3 373	1 490	4	5	5	6	5	6	4	6	4	4	LA
933	490	821	451	8	10	7	9	9	10	10	11	8	11	ME
4 114	2 081	3 930	1 979	3	4	3	4	3	4	3	5	4	6	MD
3 073	1 491	2 915	1 399	4	6	4	6	4	6	4	6	4	6	MA
4 597	2 294	4 423	2 118	3	4	3	4	3	4	3	5	3	4	MI
3 608	1 908	2 999	1 404	3	4	5	6	3	5	3	4	3	5	MN
2 569	1 157	2 453	1 074	2	5	3	6	3	6	2	4	2	4	MS
2 706	1 165	2 699	1 156	7	7	5	7	4	7	10	6	17	11	MO
565	222	596	235	7	12	9	14	8	13	9	13	4	10	MT
1 247	556	1 210	498	4	3	4	5	5	4	5	3	4	3	NE
598	251	591	245	7	11	6	11	6	11	9	12	10	13	NV
736	360	660	343	9	20	8	23	9	19	9	19	11	20	NH
4 850	2 331	4 805	2 223	2	3	2	3	3	3	3	3	3	3	NJ
1 465	786	1 608	871	5	6	4	5	8	10	7	7	4	5	NM
6 154	3 023	6 032	2 872	3	4	3	4	3	4	3	4	3	4	NY
9 342	4 681	9 427	4 360	2	3	2	3	2	3	2	3	2	3	NC
403	273	360	218	19	23	24	29	21	27	16	20	17	21	ND
5 946	2 806	5 787	2 724	2	3	2	3	2	3	2	3	2	3	OH
2 999	1 538	2 531	1 144	4	5	7	8	4	5	4	4	4	5	OK
1 406	529	1 374	537	6	7	6	10	6	7	7	8	6	9	OR
7 904	3 898	7 734	3 879	2	2	2	2	2	2	2	3	2	2	PA
615	311	579	293	7	11	4	7	8	12	8	12	8	12	RI
2 865	1 450	2 649	1 284	5	6	6	9	6	8	5	7	4	6	SC
361	190	353	168	17	21	16	16	17	22	18	21	20	26	SD
3 871	1 890	3 658	1 741	3	4	3	4	4	4	4	4	4	4	TN
16 679	8 258	15 337	7 498	2	2	2	2	2	3	2	2	2	2	TX
1 222	522	1 077	440	13	20	15	19	13	21	12	21	14	19	UT
376	211	336	182	16	27	22	34	13	26	14	23	17	27	VT
9 084	4 408	8 771	4 173	2	3	2	3	2	3	2	3	2	3	VA
2 898	1 234	2 818	1 236	4	4	4	5	4	5	4	5	4	5	WA
1 751	840	1 762	849	4	4	6	8	4	6	3	4	3	3	WV
3 292	1 651	3 419	1 617	2	4	2	3	2	4	3	5	2	4	WI
498	236	521	274	7	12	4	8	5	9	6	9	13	20	WY

Table 10. Value of Construction Work for Establishments With Payroll by Location of Construction Work: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Location of construction work	1987					1982 construction receipts for work done in this State ¹	Percent change 1987 (col A) to 1982 (col F)	Relative standard error of estimate (percent) for column—		
	Value of construction work done in this State ¹	Construction work done by establishments located in this State		Construction work done by establishments not located in this State						
		Number	Value of construction work	Number	Value of construction work					
A	B	C	D	E	F	G	A	C	E	
United States -----	17 010 019	9 724	14 553 369	2 976	2 456 649	11 952 831	42.3	1	1	1
Alabama -----	287 242	179	187 186	98	100 056	187 006	53.6	4	6	5
Alaska -----	169 446	49	125 665	7	43 781	233 162	-27.3	4	5	(W)
Arizona -----	279 157	105	212 273	43	66 884	179 580	55.4	5	6	1
Arkansas -----	153 762	144	110 576	137	43 185	99 370	54.7	7	10	4
California -----	2 139 275	1 059	2 034 322	62	104 952	1 320 884	62.0	1	1	1
Colorado -----	268 889	165	240 683	44	28 206	281 200	-4.4	3	4	3
Connecticut -----	217 614	111	203 941	20	13 672	79 034	175.3	4	4	(W)
Delaware -----	40 097	12	33 722	22	6 374	31 144	28.7	3	4	5
District of Columbia -----	23 831	4	2 716	25	21 115	22 761	4.7	(W)	(W)	(W)
Florida -----	1 220 799	537	927 399	147	293 400	715 771	70.6	2	2	2
Georgia -----	621 108	323	497 718	167	123 390	285 606	117.5	3	3	6
Hawaii -----	94 703	24	76 665	9	18 038	51 629	83.4	3	4	(W)
Idaho -----	36 957	67	30 879	21	6 078	45 940	-19.6	14	16	3
Illinois -----	643 112	335	606 859	64	36 253	360 758	78.3	2	2	8
Indiana -----	317 542	204	254 011	41	63 530	186 683	70.1	3	4	1
Iowa -----	106 758	110	88 762	35	17 996	108 817	-1.9	7	8	3
Kansas -----	165 951	188	121 527	129	44 424	134 384	23.5	5	6	7
Kentucky -----	197 565	156	141 910	54	55 654	164 165	20.3	4	5	2
Louisiana -----	348 156	191	231 849	72	116 307	525 433	-33.7	3	4	1
Maine -----	82 415	68	78 751	11	3 663	66 134	24.6	6	6	15
Maryland -----	348 547	181	281 377	67	67 170	177 399	96.5	3	3	7
Massachusetts -----	396 223	243	333 899	59	62 324	198 871	99.2	3	4	4
Michigan -----	496 274	291	466 384	38	29 889	280 934	76.7	3	3	5
Minnesota -----	407 273	224	395 015	84	12 257	259 620	56.9	2	3	4
Mississippi -----	117 110	72	77 607	84	39 503	93 543	25.2	5	7	4
Missouri -----	233 578	171	185 649	69	47 929	200 482	16.5	3	4	7
Montana -----	51 692	57	43 684	14	8 007	92 670	-44.2	9	11	5
Nebraska -----	81 815	44	71 434	27	10 381	121 131	-32.5	4	4	2
Nevada -----	114 498	42	66 964	25	47 534	63 224	81.1	3	5	(W)
New Hampshire -----	85 256	57	59 299	35	25 957	38 754	120.0	6	8	5
New Jersey -----	479 887	215	449 157	41	30 730	343 717	39.6	2	2	11
New Mexico -----	145 670	66	118 491	46	27 179	174 117	-16.3	6	8	1
New York -----	741 571	401	655 944	62	85 627	562 129	31.9	3	3	11
North Carolina -----	621 403	369	538 300	78	83 103	282 115	120.3	3	3	2
North Dakota -----	32 644	37	24 435	20	8 209	89 993	-63.7	14	18	16
Ohio -----	518 326	325	485 211	84	33 115	338 085	53.3	2	2	6
Oklahoma -----	134 091	204	101 296	126	32 794	212 550	-36.9	5	7	3
Oregon -----	122 500	117	105 275	19	17 224	94 600	29.5	8	10	7
Pennsylvania -----	701 658	274	641 130	53	60 527	449 730	56.0	2	2	5
Rhode Island -----	47 125	35	43 020	14	4 104	28 253	66.8	7	8	7
South Carolina -----	209 081	146	153 294	126	55 786	160 199	30.5	4	5	4
South Dakota -----	38 388	48	21 798	20	16 590	23 537	63.1	12	19	11
Tennessee -----	365 445	179	287 498	98	77 947	164 238	122.5	5	5	7
Texas -----	1 450 355	968	1 308 741	144	141 613	1 366 682	6.1	2	2	3
Utah -----	89 272	84	75 058	33	14 214	76 958	16.0	9	11	6
Vermont -----	19 604	38	18 811	4	792	20 681	-5.2	11	11	(W)
Virginia -----	699 816	230	611 850	79	87 965	283 344	147.0	2	2	4
Washington -----	323 047	271	299 745	41	23 302	193 290	67.1	4	4	14
West Virginia -----	119 978	88	72 706	51	47 272	136 383	-12.0	4	5	9
Wisconsin -----	346 940	169	310 507	85	36 433	199 934	73.5	2	2	2
Wyoming -----	56 547	28	42 353	22	14 193	146 181	-61.3	3	4	5

¹In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

Table 11. **Dollar Value of Business Done for Establishments With Payroll by Kind of Business Activity: 1987 and 1982**

[Thousand dollars. Detail may not add to total due to rounding. Based on their primary business activity or combination of activities, establishments were classified into this specific industry. These establishments, however, may also be engaged in other kinds of business activities. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Primary and other kinds of business activities	Dollar value of business done ¹		Relative standard error of estimate (percent)	
	1987	1982	1987	1982
All kinds of business.....	17 254 987	12 128 956	1	(W)
General building contractor	132 617	181 775	5	4
Highway and street contractor	536 077	367 365	1	1
Paving contractor	135 464	58 290	3	2
Heavy construction.....	15 523 747	10 570 798	(W)	(W)
Heavy construction contractor.....	13 409 108	(NA)	1	(NA)
Cable laying contractor	1 528 641	(NA)	2	(NA)
Trenching contractor	93 279	(NA)	4	(NA)
Excavating and earthmoving contractor	492 719	(NA)	2	(NA)
Electrical contractor	28 729	6 923	2	6
Concrete construction	30 241	68 893	7	1
Excavation contractor, for buildings	67 127	150 476	6	2
Other construction activities.....	302 230	(S)	4	(S)
Rental of construction machinery or equipment to others.....	66 380	54 730	2	2
Retail trade	24 275	21 011	13	3
Other activities	162 813	648 694	3	3
Kind of business activity, n.s.k.	245 287	(S)	6	(S)

¹In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

Table 12. Selected Industry Ratios for Establishments With Payroll: 1987 and 1982

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Selected statistics			Relative standard error of estimate (percent) for 1987
	1987	1982	
AVERAGE PER ESTABLISHMENT			
Number of employees**.....	19.9	19.8	1
Number of construction workers.....	16.7	17.0	1
Number of all other employees.....	3.2	(NA)	1
Payroll, all employees..... \$1,000..	455.0	379.9	1
Payroll, construction workers..... do..	345.6	308.8	1
Payroll, other employees..... do..	109.4	71.1	1
Dollar value of business done..... do..	1 739.6	1 288.5	1
Value of construction work ¹ do..	1 714.9	1 269.8	1
Cost of materials, components, supplies, and fuels..... do..	525.3	386.0	1
Construction work subcontracted to others..... do..	197.1	158.3	1
Rental cost for machinery, equipment, and buildings..... do..	63.1	48.7	2
Capital expenditures, other than land..... do..	70.1	49.9	2
Gross book value of depreciable assets..... do..	503.4	499.6	1
AVERAGE PER EMPLOYEE			
Payroll, all employees..... do..	22.8	19.2	(W)
Dollar value of business done..... do..	87.3	65.0	(W)
Value added†..... do..	51.1	37.5	(W)
AVERAGE PER CONSTRUCTION WORKER			
Payroll, construction workers..... do..	20.7	18.1	(W)
Value of construction work ¹ do..	102.5	74.5	(W)
Construction worker hours.....	1 863.8	1 832.4	1
AVERAGE PER OTHER EMPLOYEE			
Payroll, other employees..... \$1,000..	34.2	(NA)	1
AVERAGE PER DOLLAR VALUE OF CONSTRUCTION WORK¹			
Payroll, all employees.....	.265	.299	(W)
Cost of materials, components, supplies, and fuels.....	.306	.304	(W)
Cost of construction work subcontracted to others.....	.115	.125	1
Rental cost for machinery, equipment, and buildings.....	.037	.038	1

¹In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

Table 13. Selected Industry Ratios for Establishments With Payroll by State: 1987

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Location of establishment	Average number of employees** per establishment	Payroll per employee (\$1,000)	Construction worker hours per construction worker	Value of construction work per construction worker (\$1,000)	Average per dollar of value of construction work			
					Payroll, all employees	Cost of materials, components, supplies, and fuels	Cost of construction work sub-contracted to others	Rental cost for machinery, equipment, and buildings
United States -----	19.9	22.8	1 863.8	102.5	.265	.306	.115	.037
Alabama -----	19.3	17.2	2 049.0	76.1	.263	.311	.111	.040
Alaska -----	19.4	30.6	1 852.4	169.0	.214	.293	.111	.027
Arizona -----	26.3	24.5	1 799.1	99.4	.296	.330	.089	.050
Arkansas -----	12.3	16.2	2 066.8	84.8	.228	.356	.117	.028
California -----	18.0	27.2	1 697.5	131.2	.247	.320	.107	.048
Colorado -----	23.1	22.2	1 845.9	95.7	.290	.306	.143	.055
Connecticut -----	19.4	24.4	1 873.3	115.8	.261	.278	.090	.046
Delaware -----	80.8	18.4	1 839.9	67.6	.315	(D)	.192	.014
District of Columbia -----	12.5	20.1	1 604.7	63.2	.369	.301	.088	.042
Florida -----	25.6	18.1	1 896.4	87.7	.245	.335	.126	.033
Georgia -----	23.2	19.6	1 921.0	125.0	.181	.285	.122	.025
Hawaii -----	26.1	28.7	1 878.1	148.5	.234	.335	.155	.067
Idaho -----	8.8	18.0	1 572.6	72.6	.300	.277	.101	.035
Illinois -----	16.6	30.1	1 847.4	142.6	.262	.325	.145	.025
Indiana -----	26.3	24.8	1 731.8	78.4	.376	.318	.084	.029
Iowa -----	9.4	19.8	1 988.5	115.8	.205	.283	.138	.027
Kansas -----	9.9	19.9	1 848.2	101.8	.241	.372	.105	.041
Kentucky -----	14.2	17.7	1 804.5	89.8	.235	.332	.137	.031
Louisiana -----	20.8	19.3	1 793.8	81.2	.285	.308	.094	.040
Maine -----	13.7	27.1	2 189.3	132.7	.244	.247	.175	.043
Maryland -----	25.1	21.1	1 953.1	83.6	.300	.327	.102	.030
Massachusetts -----	13.8	28.3	1 894.5	132.2	.267	.288	.100	.045
Michigan -----	16.5	26.7	1 881.1	125.9	.254	.328	.131	.033
Minnesota -----	15.0	27.1	1 939.5	158.4	.208	.314	.190	.029
Mississippi -----	34.9	16.4	1 758.5	62.2	.298	.302	.106	.032
Missouri -----	16.3	23.3	1 742.3	108.6	.254	.320	.111	.020
Montana -----	11.6	23.7	1 651.0	110.2	.279	.330	.112	.030
Nebraska -----	31.5	20.1	1 666.1	64.9	.369	.472	.067	.029
Nevada -----	15.5	28.0	1 701.5	127.5	.268	.340	.074	.053
New Hampshire -----	13.6	24.6	1 978.8	97.8	.296	(D)	.065	.051
New Jersey -----	24.1	30.7	1 843.0	123.4	.299	.259	.112	.045
New Mexico -----	27.6	19.3	2 061.7	92.8	.256	.306	.105	.046
New York -----	16.7	27.5	1 906.1	121.4	.273	.275	.081	.040
North Carolina -----	27.7	19.7	1 887.0	75.3	.300	.279	.125	.022
North Dakota -----	9.9	19.5	2 429.5	93.3	.260	.349	.082	.043
Ohio -----	19.2	24.8	1 844.9	107.9	.272	.291	.104	.031
Oklahoma -----	14.6	26.6	1 877.1	86.6	.366	.198	.079	.051
Oregon -----	12.3	22.3	1 567.7	106.7	.256	.327	.171	.042
Pennsylvania -----	30.4	25.5	1 918.8	94.3	.325	.277	.082	.033
Rhode Island -----	19.6	21.5	1 980.0	114.4	.235	.309	.118	.024
South Carolina -----	21.7	16.8	1 959.4	68.0	.290	.289	.116	.032
South Dakota -----	7.3	16.9	1 903.7	91.9	.233	.383	.052	.026
Tennessee -----	23.2	18.2	1 894.2	100.1	.216	.330	.131	.032
Texas -----	19.4	20.6	1 928.9	92.9	.265	.326	.121	.049
Utah -----	15.5	21.6	1 693.0	101.0	.262	.314	.127	.046
Vermont -----	9.7	19.8	2 155.6	86.1	.276	.275	.123	.036
Virginia -----	40.2	19.5	1 908.9	79.4	.284	.286	.114	.022
Washington -----	11.4	26.0	1 681.1	138.0	.230	.311	.152	.041
West Virginia -----	20.1	20.7	1 883.4	65.1	.364	.224	.047	.038
Wisconsin -----	20.5	27.5	1 901.2	110.8	.294	.304	.092	.027
Wyoming -----	18.2	21.5	1 936.0	126.7	.198	.293	.115	.026

APPENDIX A.

Explanation of Terms

Construction—Is composed of three broad categories:

1. **New construction**—Includes the complete, original erection of structures and essential service facilities and the initial installation of integral equipment such as elevators, and plumbing, heating, and air-conditioning supplies and equipment.
2. **Additions, alterations or reconstruction**—Includes construction activity making structural changes to existing facilities. Generally, this type of activity is considered a capital investment in the property.
3. **Maintenance and repair**—Includes construction done for the purpose of upkeep of property rather than additional investment in the property.

Examples of the general distinction between maintenance and repair and reconstruction are provided here: roof repairs, including the replacement of shingles, gutters, etc., are classified under maintenance and repairs. A complete reroofing, however, is classified as reconstruction.

Number of establishments in business during year—Includes all establishments that were in business at any time during the year. It covers all full-year and part-year operations. Construction establishments which were inactive or idle for the entire year were not included.

Proprietors and working partners—These data were not collected on the census report forms. The data shown are based on crediting each sole proprietorship establishment with one active proprietor and each partnership establishment with two working partners.

All employees—Comprise all full-time and part-time employees on the payrolls of construction establishments, who worked or received pay for any part of the pay period including the 12th of March, May, August, and November. Included are all persons on paid sick leave, paid holidays, and paid vacations during these pay periods. Officers of corporations are included, but proprietors and partners of unincorporated firms are not.

All employees is the sum of all employees during the pay periods including the 12th of March, May, August, and November, divided by 4.

Construction workers—Includes all workers up through the working foreman level directly engaged in construction operations, such as painters, carpenters, plumbers, and electricians. Included are journeymen, mechanics, apprentices, laborers, truck drivers and helpers, equipment

operators, and on-site record keepers and security guards. Supervisory employees above the working foreman level are excluded from this category but are included in the "other employees" category.

Other employees—Includes employees in executive, purchasing, accounting, personnel, professional, technical activities, and routine office functions. Also included are supervisory employees above the working foreman level.

Construction worker hours—Includes the total number of hours worked by construction workers. Construction worker hours were collected for each of the four quarters of 1987.

Payroll—Includes the gross earnings paid in the calendar year 1987 to all employees on the payroll of construction establishments. It includes all forms of compensation such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, prior to such deductions as employees' Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of these establishments, if a corporation, but excludes payments to the proprietor or partners, if an unincorporated concern.

Employer costs for fringe benefits (supplemental labor costs)—Represents expenditures made by the employer during 1987 for legally required and voluntary fringe benefit programs for employees.

Legally required contributions—Include Social Security contributions, unemployment compensation, workman's compensation, and State temporary disability payments.

Voluntary payments—Include life insurance premiums, pension plans, insurance premiums on hospital and medical plans, welfare plans, and union negotiated benefits.

Dollar value of business done comprises the following detail:

Value of construction work done—Includes all value of construction work done during 1987 for construction work performed by general contractors, special trades contractors, subcontractors, and land development and improvement work. Included is new construction, additions and alterations or reconstruction, and maintenance and repair construction work. Also included is the value of any construction work done by the reporting establishments for themselves.

Builders were instructed to include the value of buildings and other structures built or being built for sale in 1987 but not sold. They were to include the costs of such construction plus normal profit. Also included is the cost of construction work done on buildings for rent or lease.

Establishments engaged in the sale and installation of such construction components as plumbing, heating, and central air conditioning supplies and equipment; lumber and building materials; paint, glass, and wallpaper; and electrical and wiring supplies, elevators or escalators, etc., were instructed to include both the value for the installation and the receipts covering the price of the items installed.

Excluded was the cost of industrial and other specialized machinery and equipment which are not an integral part of a structure.

Land receipts—Includes receipts from the sale of land, whether held for sale or sold in connection with the sale of houses and other structures. It excludes the value of any improvements made to the land prior to the sale. (That value was to be included in the value of construction work done.)

Other business receipts—Includes business receipts not reported as value of construction work done or land receipts. The item includes business receipts from retail and wholesale trade, rental of equipment, manufacturing, transportation, legal service, insurance, finance, rental of property and other real estate operations, and other nonconstruction activities. Receipts for separately definable architectural and engineering work for others are also included here.

Excluded was the value of construction work done and receipts from other business operations in foreign countries and non-operating income such as interest and dividends.

Net value of construction work—Derived for each establishment by subtracting the costs for construction work subcontracted to others from the value of construction work done. (For a further explanation see "Duplication in Value of Construction Work" section in the Introduction.)

Value added—Derived for each establishment, value added is equal to dollar value of business done, less costs for construction work subcontracted to others, and costs for materials, components, supplies and fuels. For SIC 6552 and SIC 1531, for which land receipts are significant, land receipts are also subtracted from dollar value of business done. (For a further explanation see "Duplication in Value of Construction Work" section in the Introduction.)

Selected costs—Represents the costs for materials, components, and supplies; costs for construction work subcontracted to others; and costs for selected power, fuels, and lubricants. Capital expenditures and rental costs for machinery, equipment, and structures are shown elsewhere.

Costs for materials, components, and supplies include:

- total costs to reporting establishments during 1987 for the purchase of all materials, components, and supplies, except fuels. (Supplies include expendable tools which are charged to current accounts.)
- freight and other direct charges should represent only amount paid after discounts, and the value of materials, components, and supplies obtained from other establishments of the respondent's company.
- costs for materials, components, and supplies used by the reporting establishments in the construction or reconstruction of buildings/structures for themselves which are chargeable to their fixed assets accounts, are included in this item as are costs for materials bought and resold to others.
- costs made for direct purchases of materials, components, and supplies even though the purchases were subsequently provided to subcontractors for their use.

Excluded from this item are:

- industrial and other specialized machinery and equipment, such as printing presses; computer systems; etc., which are not an integral part of a structure
- materials furnished to contractors by the owners of projects.

Costs for construction work subcontracted to others include:

- all costs during 1987 for construction work subcontracted out to other construction contractors.

Excluded from this item are:

- The costs to the reporting establishment for its purchases of materials, components, and supplies, provided to a subcontractor for his use. Such costs are reported under a separate category, "costs for materials, components, and supplies."
- costs for the rental of machinery or equipment.

Costs for selected power, fuels, and lubricants include:

- costs for fuels, lubricants, and electric energy purchased during the year from other companies, or received from other establishments of the company.
- costs for natural and manufactured gas, fuel oil, coal and coke products, etc.

Rental costs for machinery, equipment, and buildings—Includes all costs during 1987 for renting or leasing construction machinery and equipment, transportation equipment, production equipment, office equipment, furniture and fixtures, scaffolding, office space, and buildings. It

excludes costs for the rental of land. It also excludes costs under agreements which, in effect, are conditional sales contracts such as capital leases. Such costs are included in "capital expenditures."

Selected purchased services—Includes all costs during 1987 for communication services purchased from other companies or from other establishments of the company. It also includes the cost of all repairs made to structures and equipment by outside companies, or from other establishments of the same company. It includes only the cost of that repair necessary to maintain property and equipment. It excludes the cost of improvements that increase the value of property, or the cost of adapting it for another use. Such costs are included in "capital expenditures".

Assets and depreciation—Refers to the original cost of all fixed tangible assets such as buildings and other structures (offices, shops, etc.); stationary machinery (generators, shop equipment, etc.); mobile machinery (tractors, trucks, etc.); and other equipment (office furniture and fixtures, etc.). Not included are such items as current assets, depletable assets, intangible assets, and nondepreciable assets.

Data on assets and depreciation were collected separately for: (1) buildings and other structures, additions, and related facilities; and, (2) machinery and equipment.

Respondents were also asked to report capitalized expenditures, depreciation charges, and the gross value of assets sold, retired, scrapped, destroyed, etc., during 1987.

Capital expenditures—Refers to all costs actually incurred during 1987 which were or would be chargeable to the fixed assets accounts of the reporting establishments and which were of the type for which depreciation accounts are ordinarily maintained. These expenditures cover the acquisition, the construction, and the major alteration of the reporting establishment's own buildings and other structures, whether purchased, constructed under contract, or constructed by the reporting establishment's own forces; and the acquisition of machinery and equipment.

If leasing arrangements met the criteria set down by the Financial Accounting Standards Board (FASB) for a capital lease, respondents were instructed to report the original cost or market value of that equipment or building as a fixed asset and capital expenditure if acquired during 1987.

If capital expenditures were not recorded directly at the establishment level but handled centrally at the company or division level, respondents were requested to report appropriate estimates for the individual establishments.

Inventories—Includes all of the materials and supplies that are owned regardless of where they are held. Excludes materials which are owned by others, but held by the reporting establishment.

Builders who built on their own account for sale were requested to report work in progress and finished units not sold for buildings and other structures built for sale.

Inventories of multi-establishment companies were instructed to be reported by the establishment that is responsible for the inventories even if these inventories were held at a separate location.

Ownership of construction projects—This item shows the distribution of the value of construction work done by ownership of the project, that is, Government owned or privately owned. This classification relates to the ownership of the projects or work undertaken during the construction phase. Government owned projects are shown separately for Federal, and State and local governments.

Value of construction work subcontracted in from others—Includes the value of construction work during 1987 for work done by reporting establishments for other construction contractors or builders. Establishments were asked to report the approximate percent of total value of construction work accounted for by such work, and the percentages reported were applied to the reported value of construction work to develop a value for this item.

Types of construction—This item provides data by the types of buildings, structures, or other facilities being constructed or worked on by construction establishments in 1987. Respondents were instructed that each building, structure, or other facility should be classified in terms of its function. For example, a restaurant building was to be classified in the restaurant category whether it was designed as a commercial restaurant building or an auxiliary unit of an educational institution. If respondents worked on more than one type of building or structure in a multibuilding complex, they were instructed to report separately for each building or type of structure. If they worked on a building that had more than one purpose, i.e, office and residential, or commercial, they were to classify the building by major purpose.

In addition all respondents were requested to report the percentage of the value of construction work done for new construction, additions, alterations, or reconstruction, and maintenance and repair work for each of these types. See the definition of "Construction" for the meanings of these terms.

Building construction:

- **Single-family houses, detached**—Includes all residential buildings constructed for one family use.
- **Single-family houses, attached (include townhouses)**—Includes all residential buildings with two or more living quarters side by side, completely independent of one another, and separated by an unbroken wall from ground to roof.
- **Apartment buildings with two or more apartments**—Includes high-rise, low-rise, or any structures containing two or more housing units (excluding attached single-family houses and townhouses described above).
- **Hotels and motels**—Includes hotels, motels, and tourist cabins intended for transient accommodations.

- **Other residential buildings**—Includes dormitories, fraternity and sorority houses, nurses homes, and other nonhousekeeping residential structures.
- **Office buildings**—Includes all buildings which are used primarily for office space or for government administrative offices. Also included are banks or financial buildings which are three stories or more.
- **Other commercial buildings, such as stores, restaurants, and automobile service stations**—Includes all buildings which are intended for use primarily in the wholesale, retail, and service trades. For example, shopping centers, department stores, drug stores, restaurants, public garages, auto service stations, and one or two story bank or financial institutions.
- **Industrial buildings**—Includes all industrial buildings and plants which are used to house production and assembly activities. Heavy industrial facilities such as blast furnaces, petroleum refineries, chemical complexes, etc., are not included in this category, but under nonbuilding construction.
- **Warehouses**—Includes commercial warehouses, cold storage plants, grain elevators, mini-warehouses, and other such storage buildings.
- **Religious buildings**—Includes all buildings which are intended for religious services or functions, such as churches, synagogues, convents, monasteries, and seminaries.
- **Educational buildings**—Includes all buildings which are used directly in administrative and instructional activities, such as colleges, universities, elementary and secondary schools, correspondence, commercial, and trade schools. Libraries, museums, and art galleries, as well as laboratories which are not a part of a manufacturing establishment, are also included.
- **Hospitals and institutional buildings**—Includes all buildings which are intended to provide hospital and institutional care, such as clinics, infirmaries, sanitariums, nursing homes, homes for the aged, and orphanages.
- **Farm buildings, nonresidential**—Includes nonresidential farm buildings such as barns, poultry houses, implement sheds, and farm silos.
- **Amusement, social, and recreational buildings**—Includes buildings which are used primarily for entertainment, social and recreational activities, such as sports arenas, theaters, music halls, golf and country club buildings, skating rinks, bowling alleys, and indoor swimming pools.
- **Other nonresidential buildings**—Includes nonresidential buildings which are not classified elsewhere, such as fire stations, prisons, civic centers, bus and air passenger terminals and hangars.

Nonbuilding construction:

- **Highways, streets and related work, such as installation of guardrails, highway signs, etc.**—Includes streets, roads, alleys, sidewalks, curbs and gutters, culverts, right-of-way drainage, erosion control and lighting. Also includes earthwork protective structures when used in connection with road improvements.
- **Outdoor swimming pools**—Includes wading pools and reflecting pools.
- **Recreational facilities**—Includes athletic fields, golf courses, outdoor tennis courts, trails, and camps.
- **Bridges and elevated highways**—Includes viaducts and overpasses; roads, highways, railroads, and causeways built on structural supports.
- **Tunnels**—Includes highway, pedestrian, and railroad tunnels.
- **Railroad construction**—Includes the construction of railroad beds, tracks, freight yards, and signal towers.
- **Subway construction**—Includes urban mass transit subway systems above or below ground.
- **Dam and reservoir construction**—Includes hydroelectric, water supply, and flood control dams and reservoirs.
- **Marine construction**—Includes dredging, underwater rock removal, breakwaters, navigational channels, jetties, and locks.
- **Harbor and port facilities**—Includes docks, piers, and wharves.
- **Conservation and development construction**—Includes land reclamation, irrigation projects, drainage canals, levees, and flood control projects.
- **Power and communication transmission lines, towers, and related facilities**—Includes electric power lines, telephone and telegraph lines, fiber optic cables, cable television lines, television and radio towers, electric light and power facilities.
- **Power plants, except nuclear**—Includes electric and steam generating plants.
- **Power plants, nuclear**—Includes atomic energy plants, and nuclear reactors.
- **Sewers, sewerlines, and related facilities**—Includes sanitary and storm sewers, and related facilities.
- **Sewage treatment plants**—Includes sewage treatment and waste disposal plants.
- **Water mains and related facilities**—Includes water supply systems and related facilities.

- **Water treatment plants**—Includes water filtration and water softening plants.
- **Pipeline construction other than sewer or waterlines**—Includes pipelines for the transmission of gas, petroleum products, and liquefied gases.
- **Blast furnaces, petroleum refineries, chemical complexes, etc.**—Includes coke ovens, and mining appurtenances such as tipples and washeries.
- **Other nonbuilding construction**—Includes all types of nonbuilding construction, not included elsewhere.

APPENDIX B.

Standard Industrial Classification Titles for Industry Groups and Industries

SIC code	Industry titles	SIC code	Industry titles
15	BUILDING CONSTRUCTION—GENERAL CONTRACTORS AND OPERATIVE BUILDERS	17	CONSTRUCTION—SPECIAL TRADE CONTRACTORS—Con.
152	General Building Contractors—Residential Buildings	173	Electrical Work Special Trade Contractors
1521	General Contractors—Single-Family Houses	1731	Electrical Work Special Trade Contractors
1522	General Contractors—Residential Buildings, Other Than Single-Family	174	Masonry, Stone Work Tile Setting, and Plastering Special Trade Contractors
153	Operative Builders	1741	Masonry, Stone Setting, and Other Stone Work Special Trade Contractors
1531	Operative Builders	1742	Plastering, Drywall, Acoustical, and Insulation Work Special Trade Contractors
154	General Building Contractors—Nonresidential Buildings	1743	Terrazzo, Tile, Marble, and Mosaic Work Special Trade Contractors
1541	General Contractors—Industrial Buildings and Warehouses	175	Carpentry and Floor Work Special Trade Contractors
1542	General Contractors—Nonresidential Buildings, Other Than Industrial Buildings and Warehouses	1751	Carpentry Work Special Trade Contractors
16	HEAVY CONSTRUCTION OTHER THAN BUILDING CONSTRUCTION—CONTRACTORS	1752	Floor Laying and Other Floor Work Special Trade Contractors, Not Elsewhere Classified
161	Highway and Street Construction, Except Elevated Highways	176	Roofing, Siding, and Sheet Metal Work Special Trade Contractors
1611	Highway and Street Construction Contractors, Except Elevated Highways	1761	Roofing, Siding, and Sheet Metal Work Special Trade Contractors
162	Heavy Construction, Except Highway and Street Construction	177	Concrete Work Special Trade Contractors
1622	Bridge, Tunnel, and Elevated Highway Construction Contractors	1771	Concrete Work Special Trade Contractors
1623	Water, Sewer, Pipeline, and Communications and Powerline Construction	178	Water Well Drilling Special Trade Contractors
1629	Heavy Construction, Not Elsewhere Classified	1781	Water Well Drilling Special Trade Contractors
17	CONSTRUCTION—SPECIAL TRADE CONTRACTORS	179	Miscellaneous Special Trade Contractors
171	Plumbing, Heating, and Air-Conditioning Special Trade Contractors	1791	Structural Steel Erection Special Trade Contractors
1711	Plumbing, Heating, and Air-Conditioning Special Trade Contractors	1793	Glass and Glazing Work Special Trade Contractors
172	Painting and Paper Hanging Special Trade Contractors	1794	Excavation Work Special Trade Contractors
1721	Painting and Paper Hanging Special Trade Contractors	1795	Wrecking and Demolition Work Special Trade Contractors
		1796	Installation or Erection of Building Equipment, Special Trade Contractors, Not Elsewhere Classified
		1799	Special Trade Contractors, Not Elsewhere Classified
		6552	LAND SUBDIVIDERS AND DEVELOPERS, EXCEPT CEMETERIES

APPENDIX C.

Geographic Divisions and States

NEW ENGLAND STATES

Connecticut
Maine
Massachusetts
New Hampshire
Rhode Island
Vermont

MIDDLE ATLANTIC STATES

New Jersey
New York
Pennsylvania

EAST NORTH CENTRAL STATES

Illinois
Indiana
Michigan
Ohio
Wisconsin

WEST NORTH CENTRAL STATES

Iowa
Kansas
Minnesota
Missouri
Nebraska
North Dakota
South Dakota

SOUTH ATLANTIC STATES

Delaware
District of Columbia
Florida
Georgia
Maryland

SOUTH ATLANTIC STATES—Con.

North Carolina
South Carolina
Virginia
West Virginia

EAST SOUTH CENTRAL STATES

Alabama
Kentucky
Mississippi
Tennessee

WEST SOUTH CENTRAL STATES

Arkansas
Louisiana
Oklahoma
Texas

MOUNTAIN STATES

Arizona
Colorado
Idaho
Montana
Nevada
New Mexico
Utah
Wyoming

PACIFIC STATES

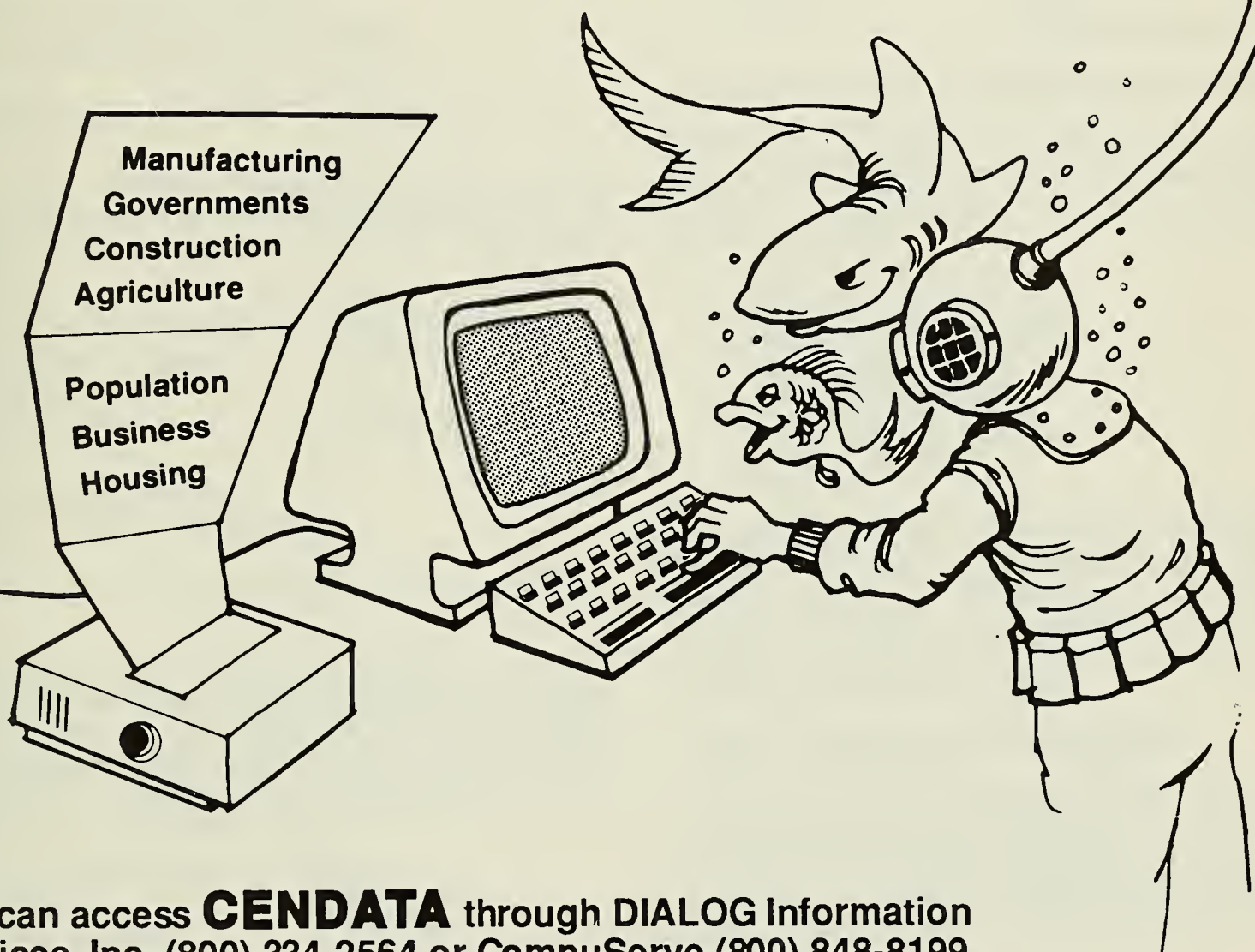
Alaska
California
Hawaii
Oregon
Washington

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PUBLICATION PROGRAM

1987 CENSUS OF CONSTRUCTION INDUSTRIES

The Census of Construction Industries is taken once every 5 years. The census covers all establishments engaged in construction, including:

- Building contractors
- Heavy construction contractors
- Special trade contractors (including plumbers, carpenters, painters, electricians)
- Land developers and subdividers

Data products in the Census of Construction Industries are issued in 4 publication series and in 3 other media:

- Printed reports [P]
- CD-ROM [C]
- Computer tape [T]
- Highlights online [+]

Preliminary Industry Series (CC87-I-1(P) through CC87-I-28(P))

(Available November 1988 through May 1989) [P]

Twenty-seven separate industry reports and a United States summary report, providing national statistics for establishments with payroll. Statistics shown for 1987 include:

- Number of establishments
- Number of employees
- Payroll
- Hours worked
- Value of construction work done, by type of structure
- Selected operating costs

Final Industry Series (CC87-I-1 through CC87-I-28)

(Available June 1989 through November 1989) [P] [C] [T] [+]

Twenty-seven separate industry reports and a United States summary report, providing statistics for the Nation and individual States on establishments with payroll. These reports update figures from the preliminary industry series (employment, payroll, value of construction, etc.) and provide measures of the following:

- Capital expenditures
- Inventories
- Industry profiles
- Assets
- Depreciation
- And much more

Geographic Area Series (CC87-A-1 through CC87-A-10)

(Available January 1990 through March 1990) [P] [C] [T] [+]

Nine reports on the construction industries, representing each census geographic division, and a United States summary report. Regional reports provide detailed data for States and metropolitan statistical areas.

Subject Report—Legal Form of Organization and Type of Operation (CC87-S-1)

(Available May 1990) [P]

One report providing selected national statistics for each industry by legal form of organization and type of operation. This report includes data for establishments with and without payroll. Data in this report include—

- Employment
- Payroll
- Value of construction work done
- Selected operating costs

OTHER ECONOMIC CENSUSES REPORTS

The Census of Construction Industries is part of the 1987 Economic Censuses. These are conducted at five-year intervals in years ending in 2 and 7 and consist of seven separate censuses:

- Census of Retail Trade
- Census of Wholesale Trade
- Census of Service Industries
- Census of Transportation
- Census of Manufactures
- Census of Mineral Industries
- Census of Construction

...plus several related programs: enterprise statistics; information on minority-owned and women-owned businesses; and the Census of Outlying Areas, including separate economic censuses of Puerto Rico and other outlying areas. The Census of Agriculture and Census of Governments are conducted separately.

HOW TO ORDER DATA PRODUCTS

Order forms for the specific reports and other data products may be obtained from Data User Services Division, Customer Services (Publications), Bureau of the Census, Washington, DC 20233. If you have any questions, call Census Customer Services 1-(301)-763-4100.



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CC87-1-8

Water, Sewer, Pipeline, and Communications
and Powerline Construction Contractors

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Industries